eMachines

EL1700
Service Guide

Service guide files and updates are available on the ACER/CSD web; for more information, please refer to http://csd.acer.com.tw

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on this service guide.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives additional information related to the current topic.
WARNING	Alerts you to any physical risk or system damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

Service Guide Coverage

This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.

FRU Information

Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Tour

Features

Below is a brief summary of the computer's many feature:

NOTE: The features listed in this section is for your reference only. The exact configuration of the system depends on the model purchased.

Processor

- Intel Pentium Core 2 Quad Q6600/Q6700/Q8200/Q9300/Q9400/Q9450/Q9550/Q9650 processor
- Intel Pentium Core 2 Duo E2180/E2200/E4700/E5200/E7200/E8400 processor
- Intel Celeron Dual-Core E1200 processor
- Intel Celeron 450 processor

Chipset

- NVIDIA nForce MCP73PV

Memory subsystem

- Supports up to two 240-pin DDR2-533/667/800 MHz DIMM sockets
- Supports memory size up to 4GB

Media storage

- DVD-ROM SATA drive
- Super-Multi SATA DVD drive
- 160 or 320 GB SATA hard disk drive

Serial ATA controller

- Embedded SATA controllers
- Two SATA ports
- eSATA port

Audio

- Realtek ALC888S 8-channel audio CODEC

Networking

- One Gigabit Ethernet LAN port (RJ-45)

PCI I/O

- One PCI Express x16 bus slot
- One PCI Express x1 bus slot

I/O ports

- Front
  - Three USB 2.0 ports
  - Memory Stick
  - Memory Stick PRO
  - Secure Digital (SD) Card
  - miniSD Card
  - Headphone/speaker-out/line-out jack
  - Microphone-in jack
  - CFI/II (CompactFlash Type I/II) slot
- Rear
  - PS/2 keyboard port
  - PS/2 mouse port
  - Microphone jack
  - Headphone/analog speakers jack or front speakers jack
  - Center speaker/subwoofer jack
  - Surround L/R speaker jack
  - Audio inside speaker jack or side speaker jack
  - Four USB 2.0 ports
  - Gigabit LAN port
  - VGA/monitor port

Operating system and software

- Operating system options:
  - Genuine Windows Vista® Ultimate (32/64-bit)
  - Genuine Windows Vista Home Premium (32/64-bit)
- Applications
  - Acer Empowering Technology (Acer eRecovery Management)
  - Acer Arcade Live
  - McAfee Internet Security Suite 2008 Trial version
  - Adobe Reader
  - eSobi
  - NTI MediaMaker

System BIOS

- SPI ROM 8MB

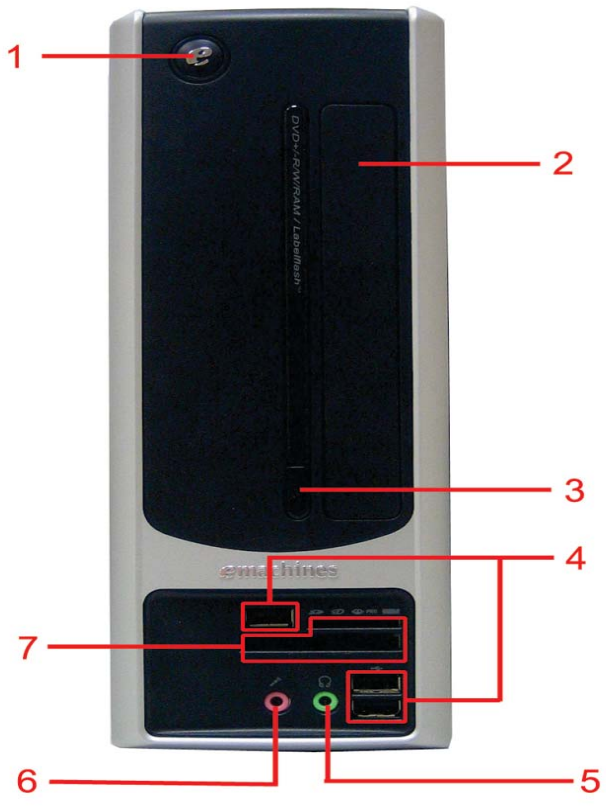
Power supply

- 220-watts (115/230 Vac) power supply

System Components

This section is a virtual tour of the system's interior and exterior components.

Front Panel

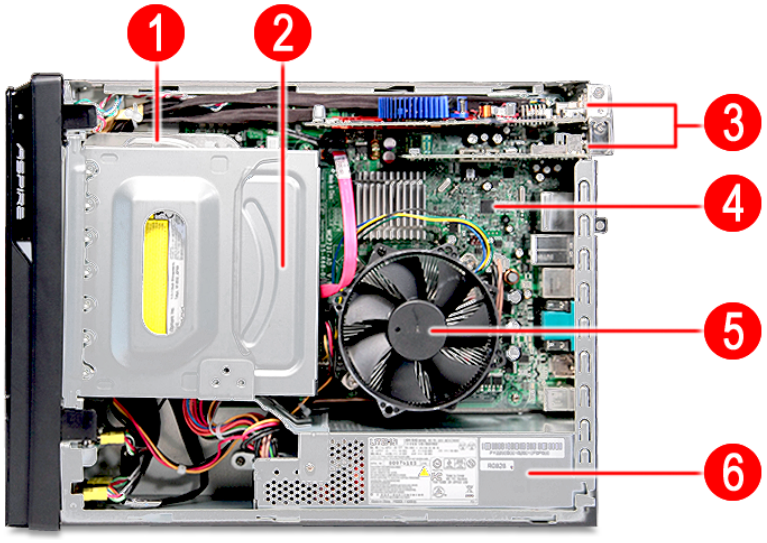


No.	Icon	Component
1		Power button/power indicator
2		Optical drive bay door
3	⏏	Drive bay door eject button Press to open drive bay door and access the optical drive.
4		USB 2.0 ports
5	🎧	Headphone/Speaker-out/line-out jack
6	🎤	Microphone-in jack
7		Media card reader

Rear Panel

No.	Icon	Component
1		Audio in or side speaker jack
2		Line-out jack
3		Microphone/speaker-out/line-in jack
4		Center speaker/subwoofer jack
5		Rear speaker/surround out jack
6		Gigabit LAN port (10/100/1000 Mbps)
7		USB 2.0 ports
8		VGA monitor port
9		PS2 keyboard port
10		PS2 mouse port
11		Power connector
12		Voltage selector switch
13		Kensington lock slot

Internal Components



No.	Component
1	HDD drive
2	Optical drive
3	Expansion cards (**expansion cards are not available in this model**)
4	Mainboard
5	Heat sink fan assembly
6	Power supply

System LED Indicators

This section describes the different system LED indicators.

LED indicator	Color	LED status	Description
Power	Green	On	The system has AC power and is powered on.
	Green	Blinking	The system is in standby mode.
	—	Off	System is not powered on.
HDD activity	Green	On	HDD is installed and functioning correctly.
	Green	Blinking	Ongoing HDD activity.
	Green/ Amber	Flashing	HDD is rebuilding data.
	Amber	On	HDD failure
LAN port network speed LED (left)	Amber	On	GbE link network access
	Green	On	100 Mbps link network access
	—	Off	10 Mbps link network access
LAN port network connection LED (right)	Green	On	Active network link
		Blinking	Ongoing network data activity
		Off	Off-line network

System Utilities

CMOS Setup Utility

CMOS setup is a hardware configuration program built into the system ROM, called the complementary metal-oxide semiconductor (CMOS) Setup Utility. Since most systems are already properly configured and optimized, there is no need to run this utility. You will need to run this utility under the following conditions.

- When changing the system configuration settings
- When redefining the communication ports to prevent any conflicts
- When modifying the power management configuration
- When changing the password or making other changes to the security setup
- When a configuration error is detected by the system and you are prompted ("Run Setup" message) to make changes to the CMOS setup

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad. In this case, the system cannot retain configuration values in CMOS. Ask a qualified technician for assistance.

CMOS setup loads the configuration values in a battery-backed nonvolatile memory called CMOS RAM. This memory area is not part of the system RAM which allows configuration data to be retained when power is turned off.

Before you run the *CMOS* Setup Utility, make sure that you have saved all open files. The system reboots immediately after you close the Setup.

NOTE: *CMOS* Setup Utility will be simply referred to as “BIOS”, "Setup", or "Setup utility" in this guide.

The screenshots used in this guide display default system values. These values may not be the same those found in your system.

Entering CMOS setup

1. Turn on the server and the monitor.

   If the server is already turned on, close all open applications, then restart the server.

2. During POST, press **Delete**.

   If you fail to press **Delete** before POST is completed, you will need to restart the server.

   The Setup Main menu will be displayed showing the Setup's menu bar. Use the left and right arrow keys to move between selections on the menu bar.

Navigating Through the Setup Utility

Use the following keys to move around the Setup utility.

- **Left** and **Right** arrow keys – Move between selections on the menu bar.
- **Up** and **Down** arrow keys – Move the cursor to the field you want.
- **PgUp** and **PgDn keys** – Move the cursor to the previous and next page of a multiple page menu.
- **Home** – Move the cursor to the first page of a multiple page menu.
- **End** – Move the cursor to the last page of a multiple page menu.
- **+** and **-** keys – Select a value for the currently selected field (only if it is user-configurable). Press these keys repeatedly to display each possible entry, or the **Enter** key to choose from a pop-up menu.

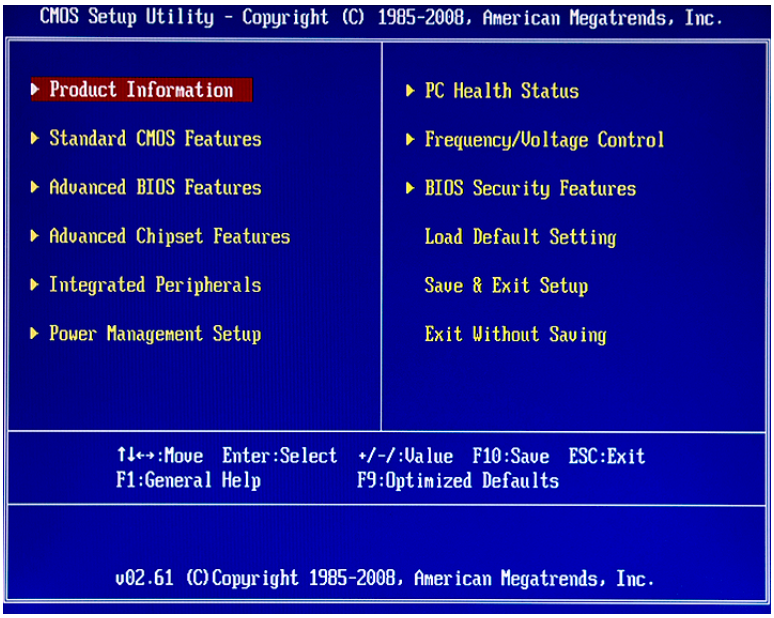
NOTE: Grayed-out fields are not user-configurable.

- **Enter** key – Display a submenu screen.

NOTE: Availability of submenu screen is indicated by a (>).

- **Esc** – If you press this key:
  - On one of the primary menu screens, the Exit menu displays.
  - On a submenu screen, the previous screen displays.
  - When you are making selections from a pop-up menu, closes the pop-up without making a selection.
- **F1** – Display the General Help panel.
- **F6** – Press to load optimized default system values.
- **F7** – Press to load fail-safe default system values.
- **F10** – Save changes made the Setup and close the utility.

Setup Utility Menus



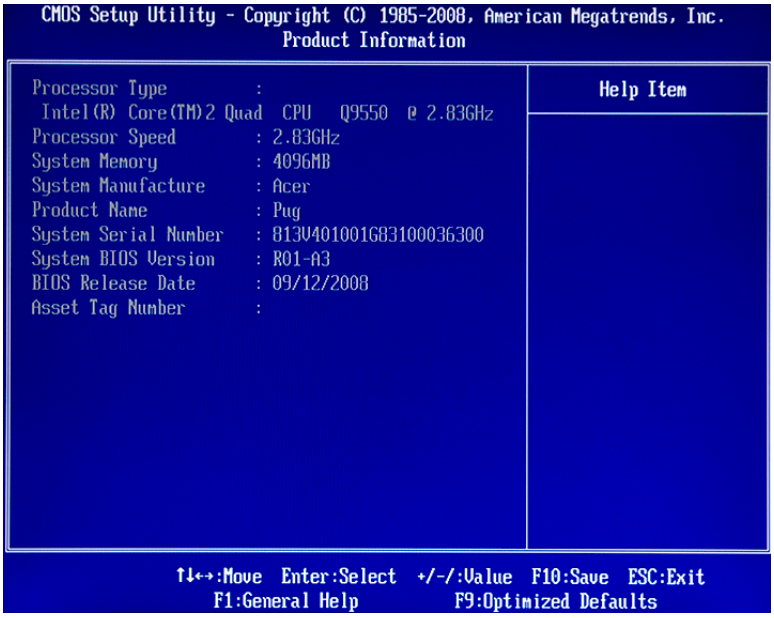
The Setup Main menu includes the following main setup categories.

- Product Information
- Standard CMOS Features
- Advanced BIOS Features
- Advanced Chipset Features
- Integrated Peripherals
- Power Management Setup
- PC Health Status
- Frequency/Voltage Control
- BIOS Security Features
- Load Default Setting
- Save & Exit Setup
- Exit Without Saving

In the descriptive table following each of the menu screenshots, settings in **boldface** are the default and suggested settings.

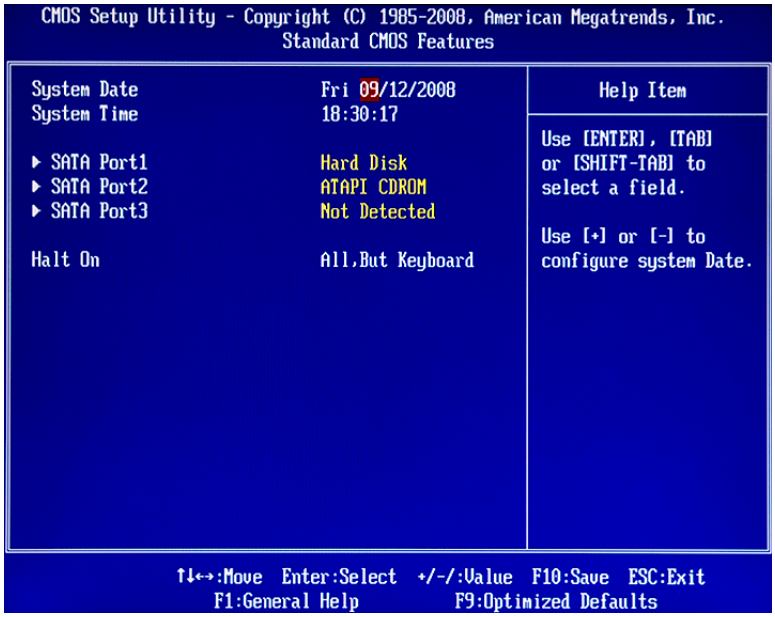
Product Information

The Product Information menu displays basic information about the system. These entries are for your reference only and are not user-configurable.


CMOS Setup Utility - Copyright (C) 1985-2008, American Megatrends, Inc.
Product Information
Processor Type :
Intel(R) Core(TM)2 Quad CPU Q9550 @ 2.83GHz
Processor Speed : 2.83GHz
System Memory : 4096MB
System Manufacture : Acer
Product Name : Pug
System Serial Number : B13V401001GB3100036300
System BIOS Version : R01-A3
BIOS Release Date : 09/12/2008
Asset Tag Number :
Help Item
↑↓↔:Move Enter:Select +/-/:Value F10:Save ESC:Exit
F1:General Help F9:Optimized Defaults

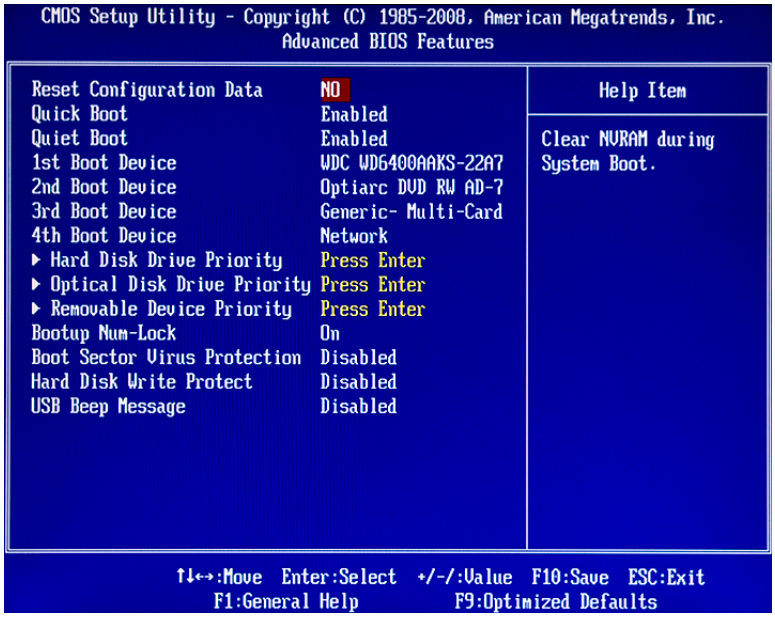
Parameter	Description
Processor Type	Type of CPU installed on the system.
Processor Speed	Speed of the CPU installed on the system.
System Memory	Total size of system memory installed on the system.
System Manufacturer	Name of the manufacturer of this system.
Product Name	Product name of the system.
System Serial Number	Serial number of the system.
System BIOS Version	Version number of the BIOS setup utility.
BIOS Release Date	Date when the BIOS setup utility was released
Asset Tag Number	Asset tag number of this system.

Standard CMOS Features



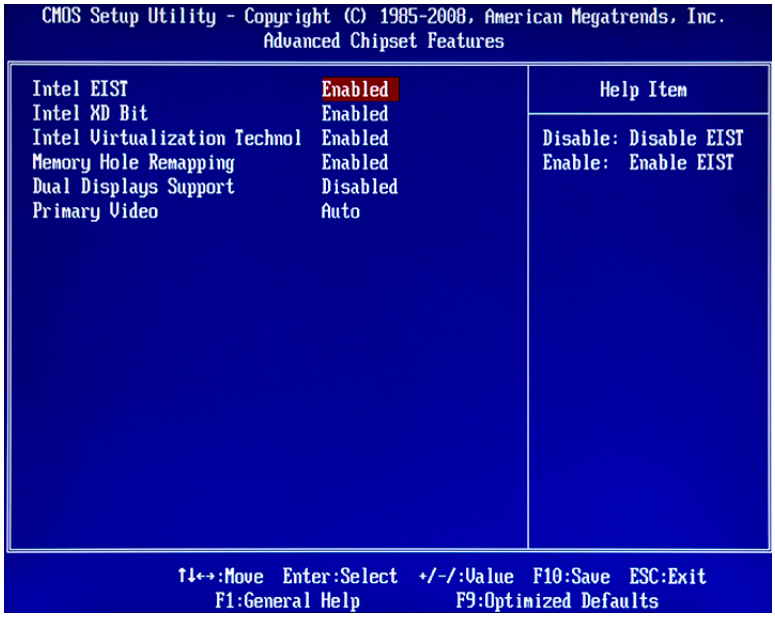
Parameter	Description	Option
System Date	Set the date following the weekday-month-day-year format.	
System Time	Set the system time following the hour-minute-second format.	
SATA Port 1/2/3	Press **Enter** to view detailed device information connected to the SATA connectors.	
Halt On	Determines whether the system will stop for an error during the POST.	**All, But Keyboard** No Errors All Errors

Advanced BIOS Features


CMOS Setup Utility - Copyright (C) 1985-2008, American Megatrends, Inc.
Advanced BIOS Features
Reset Configuration Data NO
Quick Boot Enabled
Quiet Boot Enabled
1st Boot Device WDC WD6400AAKS-22A7
2nd Boot Device Optiarc DVD RW AD-7
3rd Boot Device Generic- Multi-Card
4th Boot Device Network
Hard Disk Drive Priority Press Enter
Optical Disk Drive Priority Press Enter
Removable Device Priority Press Enter
Bootup Num-Lock On
Boot Sector Virus Protection Disabled
Hard Disk Write Protect Disabled
USB Beep Message Disabled
Help Item
Clear NVRAM during System Boot.
↑↓↔:Move Enter:Select +/-/:Value F10:Save ESC:Exit
F1:General Help F9:Optimized Defaults

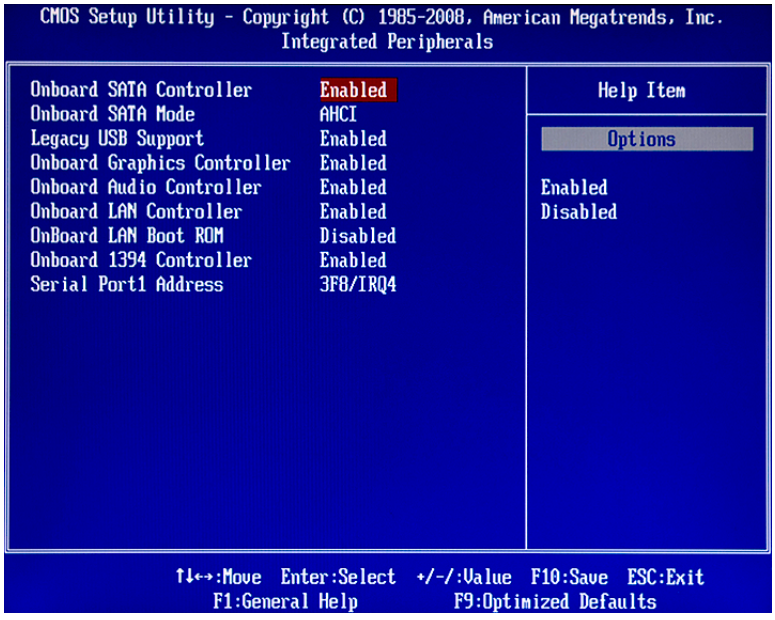
Parameter	Description	Option
Reset Configuration Data	Allows you to manually force BIOS to clear the previously saved Extended System Configuration Data (ESCD) data and reconfigure the settings. When set to no, it lets the BIOS configure all the devices in the system. When set to yes, it lets the OS configure Plug and Play (PnP) devices not required for boot if the system has a PnP OS.	**No** Yes
Quick Boot	Allows you to decrease the time it takes to boot the computer by shortening or skipping certain standard booting process.	**Enabled** Disabled
Quiet Boot	When enabled, the BIOS splash screen displays during startup. When disabled, the diagnostic screen displays during startup.	**Enabled** Disabled
1st/2nd/3rd/4th Boot Device	Specifies the boot order from the available devices.	Hard Disk CD^DVD Removable Device LAN
Hard Disk Drive Priority	Press **Enter** to access the Hard Disk Drive Priority submenu and specify the boot device priority sequence from available hard drives.	
Optical Disk Drive Priority	Press **Enter** to access the Optical Disk Drive Priority submenu and specify the boot device priority sequence from available CD/DVD drives.	
Removable Device Priority	Press **Enter** to access the Removable Device Priority submenu and specify the boot device priority sequence from available removable drives.	
Bootup Num-Lock	Selects power on state for Num Lock.	**On** Off
Boot Sector Virus Protection	Enables or disables the boot sector virus protection feature. If enabled, BIOS will show a warning message on the screen or an alarm beep when someone attempts to write data into this area.	**Disabled** Enabled
Hard Disk Write Protect	Enables or disables the hard disk write protect feature.	**Disabled** Enabled
USB Beep Message	Enables or disables BIOS to display error beeps or messages during USB device enumeration.	**Disabled** Enabled

Advanced Chipset Features


CMOS Setup Utility - Copyright (C) 1985-2008, American Megatrends, Inc.
Advanced Chipset Features
Intel EIST Enabled
Intel XD Bit Enabled
Intel Virtualization Technol Enabled
Memory Hole Remapping Enabled
Dual Displays Support Disabled
Primary Video Auto
Help Item
Disable: Disable EIST
Enable: Enable EIST
↑↓↔:Move Enter:Select +/-/:Value F10:Save ESC:Exit
F1:General Help F9:Optimized Defaults

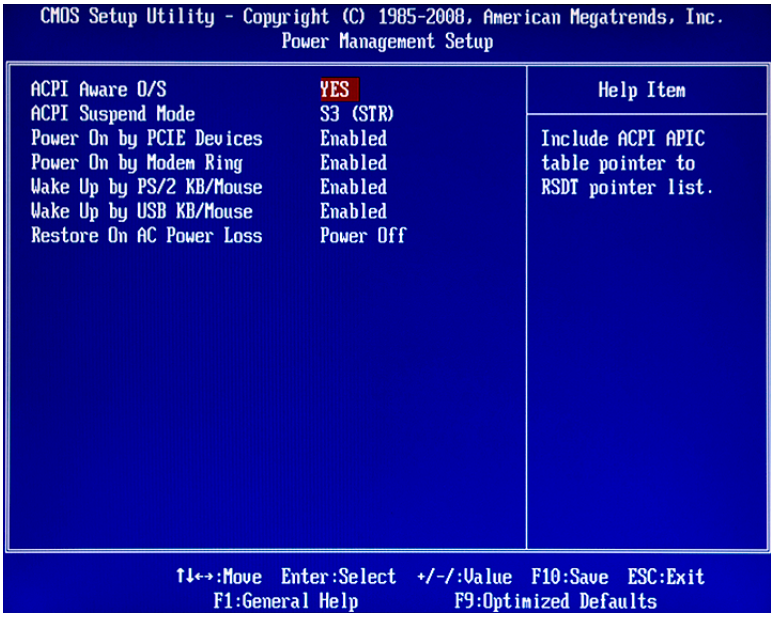
Parameter	Description	Option
Intel EIST	When enabled, this feature allows the OS to reduce power consumption. When disabled, the system operates at maximum CPU speed.	**Enabled** Disabled
Intel XD Bit	When enabled, the processor disables code execution when a worm attempts to insert a code in the buffer preventing damage and worm propagation. When disabled, the processor forces the Execute Disable (XD) Bit feature flag to always return to 0.	**Enabled** Disabled
Intel Virtualization Technology	Enables or disables the Virtualization Technology (VT) availability. If enabled, a virtual machine manager (VMM) can utilize the additional hardware virtualization capabilities provided by this technology. **Note:** A full reset is required to change the setting.	**Enabled** Disabled
Memory Hole Remapping	Enables or disables remapping of overlapped PCI memory above the total physical memory.	**Enabled** Disabled
Dual Displays Support	Enables or disabled dual display support.	**Disabled** Enabled
Primary Video	Select a graphic controller as a primary boot device.	**Auto** PCIE Onboard VGA

Integrated Peripherals



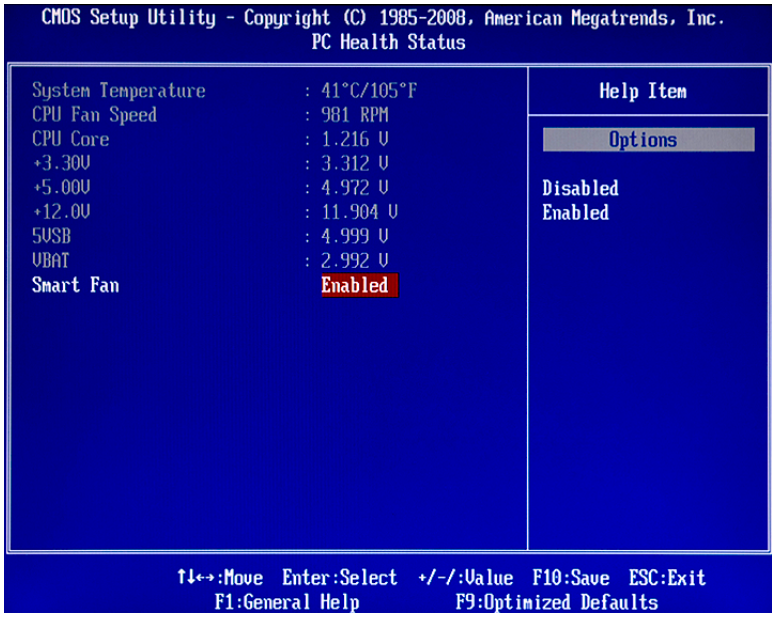
Parameter	Description	Option
Onboard SATA Controller	Enables or disables the onboard SATA controller.	**Enabled** Disabled
Onboard SATA Mode	Select an operating mode for the onboard SATA.	**AHCI** Native IDE
Legacy USB Support	Enables or disables support for legacy USB devices.	**Enabled** Disabled
Onboard Graphics Controller	Enables or disables the onboard graphics controller.	**Enabled** Disabled
Onboard Audio Controller	Enables or disables the onboard audio controller.	**Enabled** Disabled
Onboard LAN Controller	Enables or disables the onboard LAN controller.	**Enabled** Disabled
Onboard LAN Boot ROM	Enables or disables the load of embedded option ROM for onboard network controller.	**Enabled** Disabled
Onboard 1394 Controller	Enables or disables the onboard IEEE 1394 controller.	**Enabled** Disabled
Serial Port1 Address	Select the I/O address and IRQ for the first serial port.	**3F8/IRQ4** 2F8/IRQ3 3E8/IRQ4 2F8/IRQ3 Disabled

Power Management Setup


CMOS Setup Utility - Copyright (C) 1985-2008, American Megatrends, Inc.
Power Management Setup
ACPI Aware O/S YES
ACPI Suspend Mode S3 (STR)
Power On by PCIE Devices Enabled
Power On by Modem Ring Enabled
Wake Up by PS/2 KB/Mouse Enabled
Wake Up by USB KB/Mouse Enabled
Restore On AC Power Loss Power Off
Help Item
Include ACPI APIC table pointer to RSDT pointer list.
↑↓↔:Move Enter:Select +/-/:Value F10:Save ESC:Exit
F1:General Help F9:Optimized Defaults

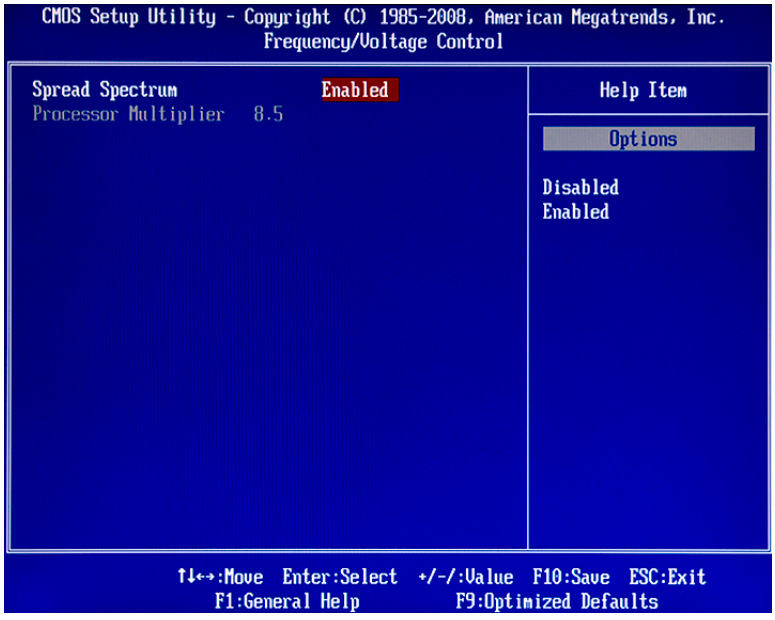
Parameter	Description	Option
ACPI Aware O/S	Enables or disables the Advanced Configuration and Power Management (ACPI) function.	**Enabled** Disabled
ACPI Suspend Mode	Select an ACPI state.	**S3 (STR)** S1 (POS)
Power On by PCIE Devices	Enables or disables to wake up the system from a power saving mode through an event on PCI Express device.	**Enabled** Disabled
Power On by Modem Ring	Enables or disable to wake the system by ring function.	**Enabled** Disabled
Wake Up by PS/2 KB/Mouse	Enables or disables to wake up the system from a power saving mode using a PS2 keyboard or mouse.	**Enabled** Disabled
Wake Up by USB KB/Mouse	If enabled, press any key or click the mouse will wake system from S1/S3 state.	**Enabled** Disabled
Restore On AC Power Loss	Enables or disables the system to reboot after a power failure or interrupt occurs.	**Power Off** Power On Last State

PC Health Status



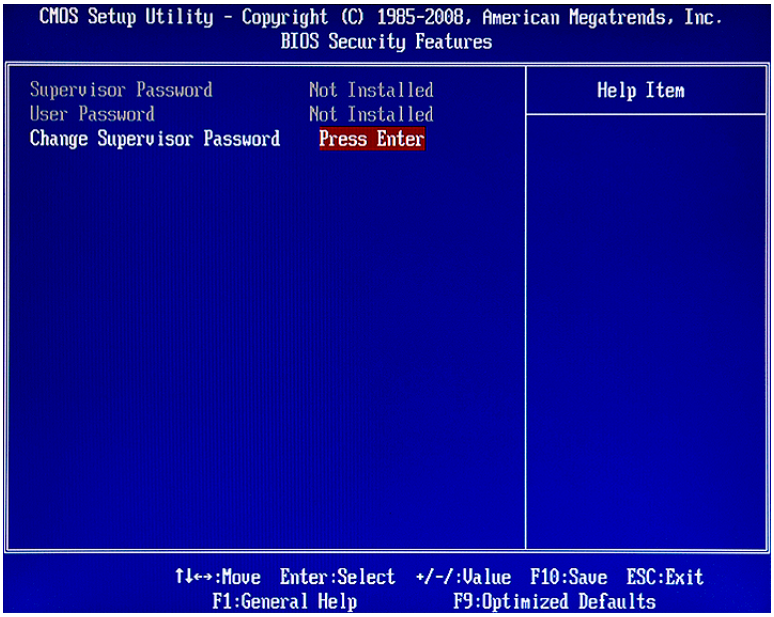
Parameter	Description	Option
Smart FAN	Enables or disables the smart system fan control function.	**Enabled** Disabled

Frequency/Voltage Control



Parameter	Description	Option
Spread Spectrum	Enables or disables the reduction of the mainboard's EMI. Note: Remember to disable the Spread Spectrum feature if you are overclocking. A slight jitter can introduce a temporary boost in clock speed causing the overclocked processor to lock up.	**Enabled** Disabled

BIOS Security Features



Parameter	Description
Supervisor Password	Indicates the status of the supervisor password.
User Password	Indicates the status of the user password.
Change Supervisor Password	Supervisor password prevents unauthorized access to the BIOS Setup Utility. Press **Enter** to change the Supervisor password.

Setting a supervisor password

1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.

   A password box will appear.
2. Type a password then press **Enter**.

   The password may consist up to six alphanumeric characters (A-Z, a-z, 0-9)
3. Retype the password to verify the first entry then press **Enter** again.
4. Press **F10**.
5. Select **Yes** to save the new password and close the Setup Utility.

Changing the supervisor password

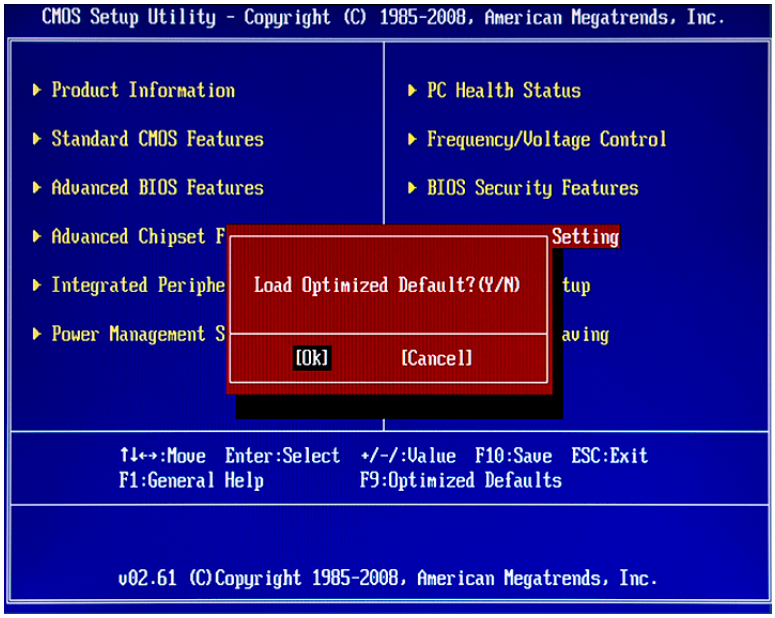
1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.
2. Type the original password then press **Enter**.
3. Type a new password then press **Enter**.
4. Retype the password to verify the first entry then press **Enter** again.
5. Press **F10**.
6. Select **Yes** to save the new password and close the Setup Utility.

Removing a supervisor password

1. Use the up/down arrow keys to select Change Supervisor Password menu then press **Enter**.
2. Enter the current password then press **Enter**.
3. Press **Enter** twice without entering anything in the password fields.

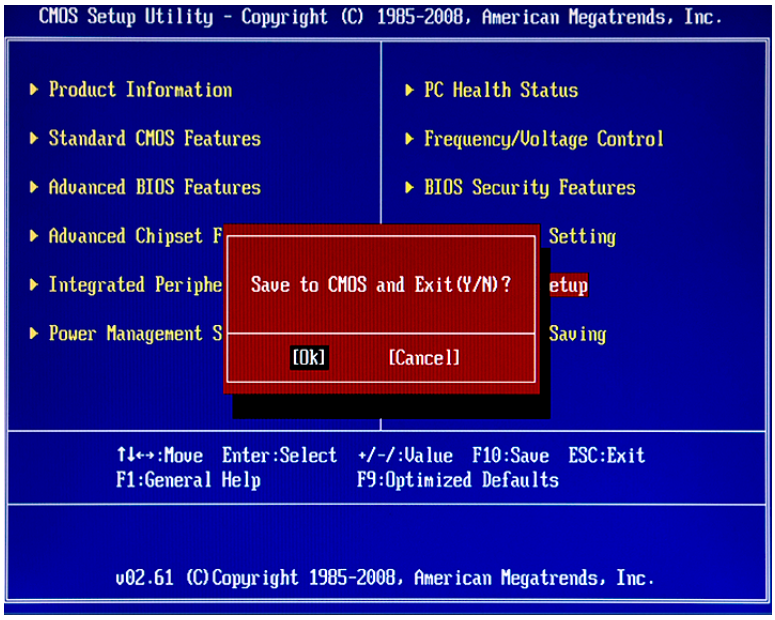
Load Default Settings

The Load Default Settings menu allows you to load the default settings for all BIOS setup parameters. Setup defaults are quite demanding in terms of resources consumption. If you are using low-speed memory chips or other kinds of low-performance components and you choose to load these settings, the system might not function properly.



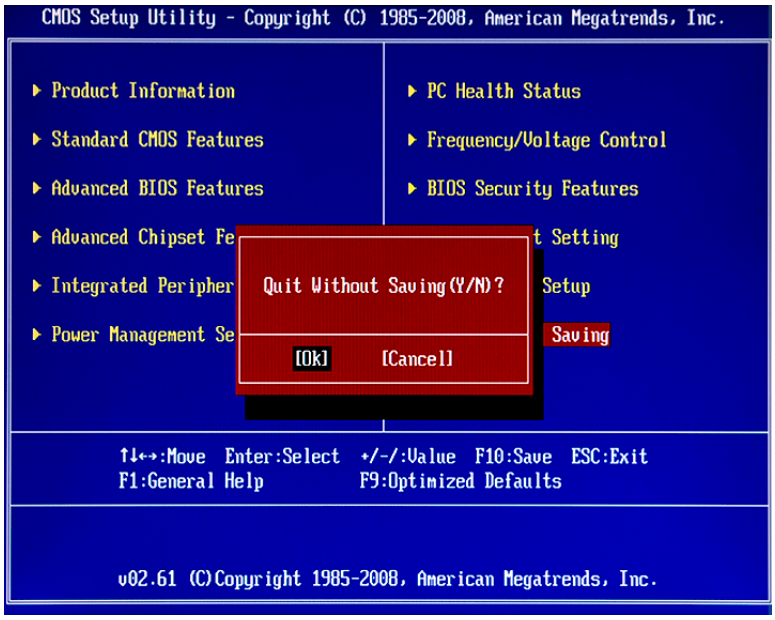
Save & Exit Setup

The Save & Exit Setup menu allows you to save changes made and close the Setup Utility.



Exit Without Saving

The Exit Without Saving menu allows you to discard changes made and close the Setup Utility.



System Disassembly

This chapter contains step-by-step procedures on how to disassemble the desktop computer for maintenance and troubleshooting.

Disassembly Requirements

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat-blade screwdriver
- Philips screwdriver
- Hex screwdriver
- Plastic flat-blade screwdriver
- Plastic tweezers

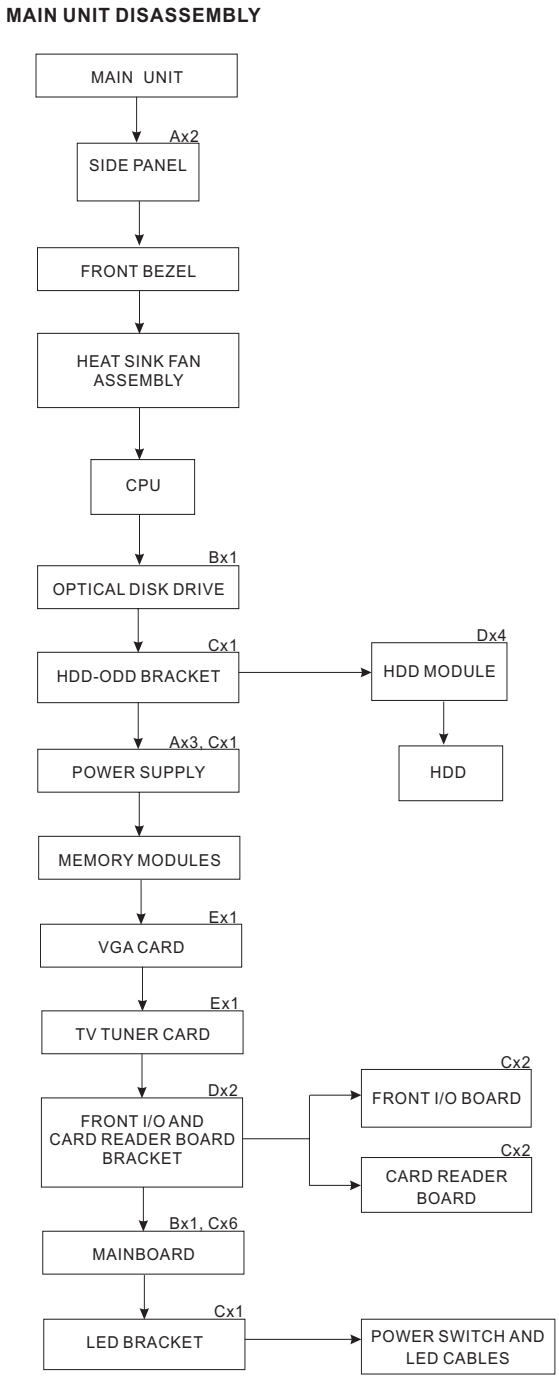
NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

Pre-disassembly Procedure

Before proceeding with the disassembly procedure, perform the steps listed below:

1. Turn off the system and all the peripherals connected to it.
2. Unplug the power cord from the power outlets.
3. Unplug the power cord from the system.
4. Unplug all peripheral cables from the system.
5. Place the system unit on a flat, stable surface.

Main Unit Disassembly



NOTE: VGA card and TV tunder card are not available on this model. There are no expension slots on the main board.

Screw List

	Screw	Part No.
A	#6-32 L5 BZN	86.00J07.B60
B	M3xL5 BZN	86.1A324.5R0
C	#6-32 L6 NI	86.00J44.C60

	Screw	Part No.
D	#6-32*3/16 NI	86.5A5B6.012
E	#6-32 5MM NI	86.9A5G6.162

Removing the Side Panel

1. Perform the pre-disassembly procedure described on page 24.
2. Remove the two screws (A) located on the rear edge of the side panel.

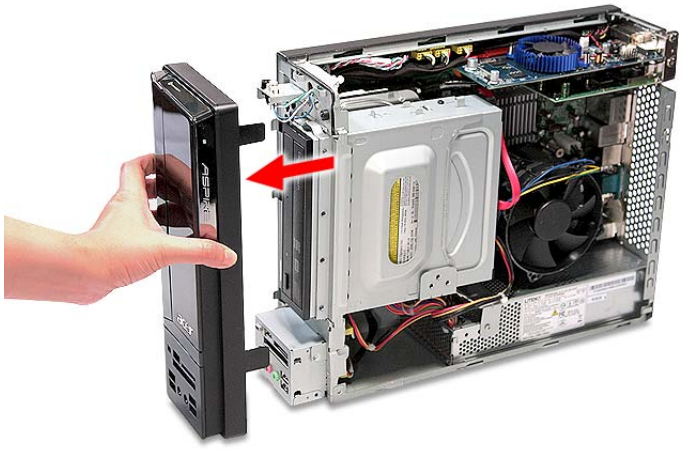
Screw (Quantity)	Color	Torque	Part No.
#6-32 L5 BZN (2)	Black	5.5 to 6.5 kgf-cm	86.00J07.B60

3. Slide the side panel toward the back of the chassis until the tabs on the cover disengage with the slots on the chassis.
4. Lift the side panel away from the server and put it aside for reinstallation later.

Removing the Front Bezel

1. Remove the side panel. Refer to the previous section for instructions.
2. Release the front bezel retention tabs from the chassis interior.

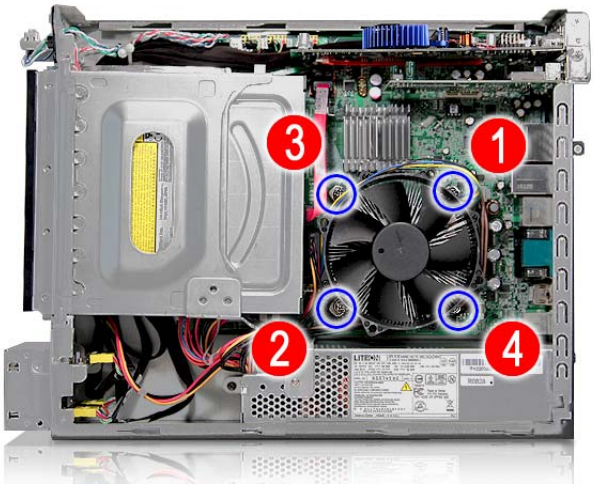
3. Pull the bezel away from the chassis.



Removing the Heat Sink Fan Assembly

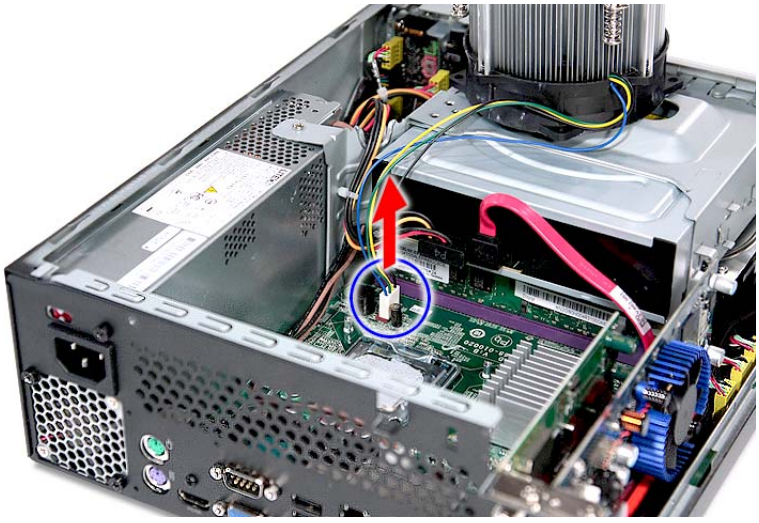
WARNING: The heat sink becomes very hot when the system is on. NEVER touch the heat sink with any metal or with your hands.

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. Use a long-nosed screwdriver to loosen the four screws on the heat sink, in the order as shown below.



4. Lift the heat sink fan assembly away from the mainboard.

5. Lay down the heat sink fan assembly, in an upright position, on top of the optical drive, as shown below, then disconnect the fan cable from the mainboard.



6. Remove the heat sink fan assembly from the chassis then lay it down in an upright position—with the thermal patch facing upward. Do not let the thermal patch on the heat sink fan assembly touch the work surface.
7. Use an alcohol pad to wipe off the thermal grease from both the heat sink and the processor.

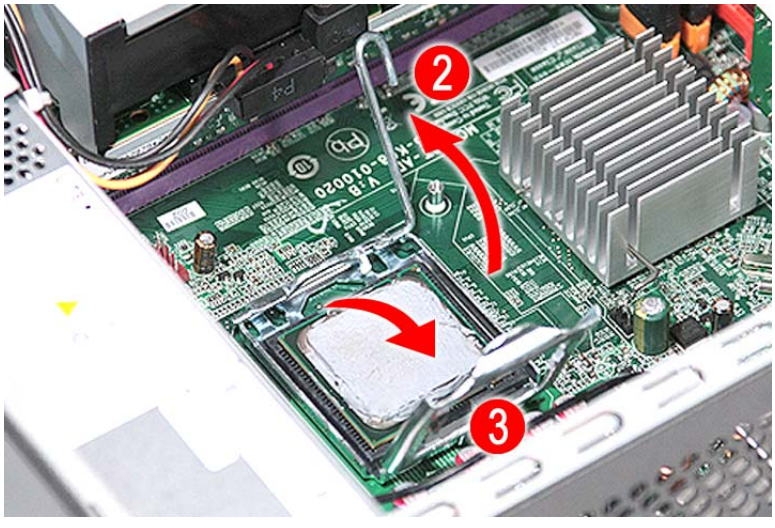
Removing the Processor

IMPORTANT: Before removing a processor from the mainboard, make sure to create a backup file of all important data.

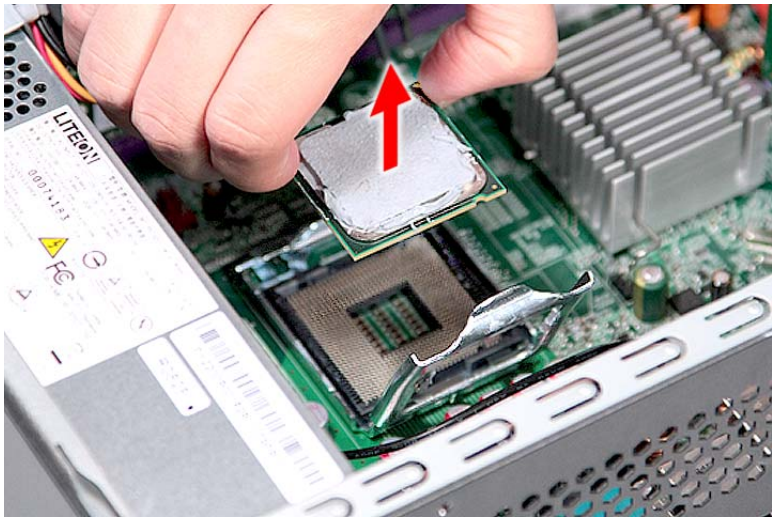
WARNING: The processor becomes very hot when the system is on. Allow it to cool off first before handling.

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. Release the load lever (1).

5. Pull the load lever to the fully open, upright position (2) and lift the load plate (3).



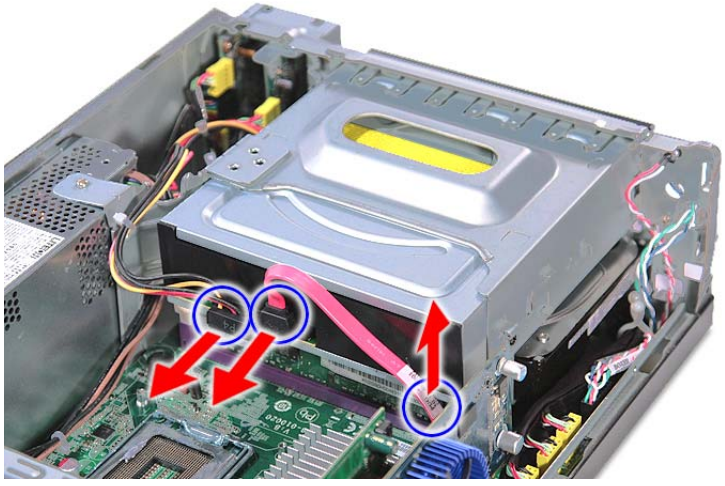
6. Pull out the processor from the socket.



IMPORTANT: If you are going to install a new processor, note the arrow on the corner to make sure the processor is properly oriented over the socket.

Removing the Optical Drive

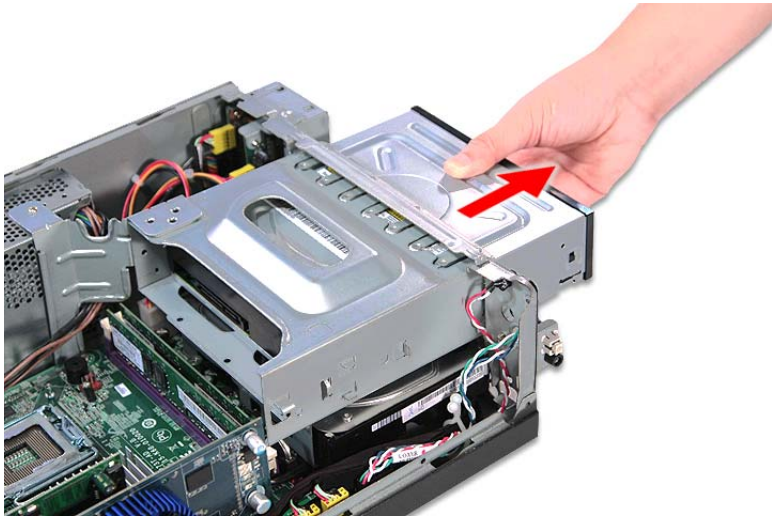
1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. Disconnect the data and power cables from the rear of the optical drive and the mainboard.



6. Remove the screw (B) from the optical drive.

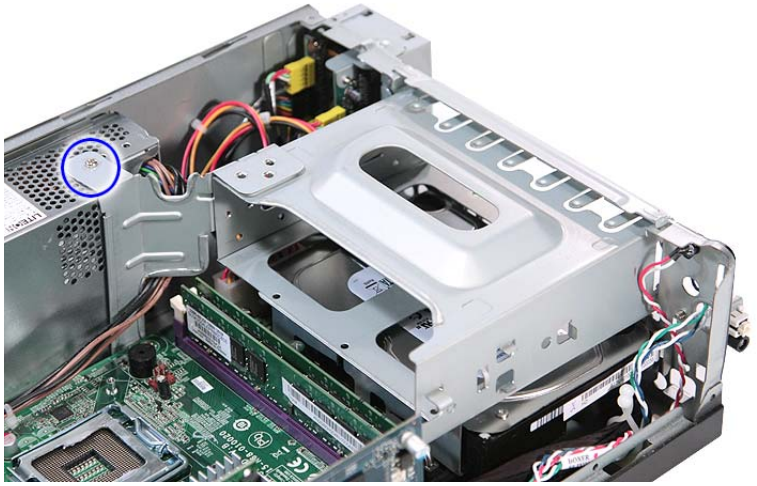
Screw (Quantity)	Color	Torque	Part No.
M3xL5 (1)	Black	5.5 to 6.5 kgf-cm	86.1A324.5R0

7. Pull the drive out of the drive bay.



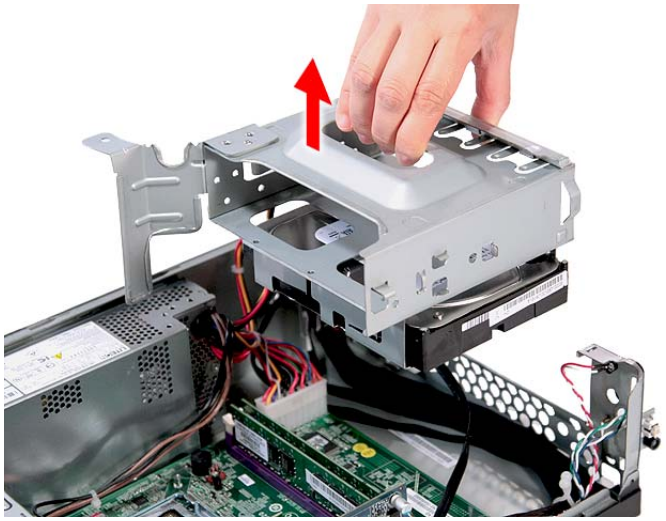
Removing the Hard Disk Drive

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. Remove the HDD-ODD bracket.
   a. Remove the screw (C) that secures the HDD bracket to the chassis.

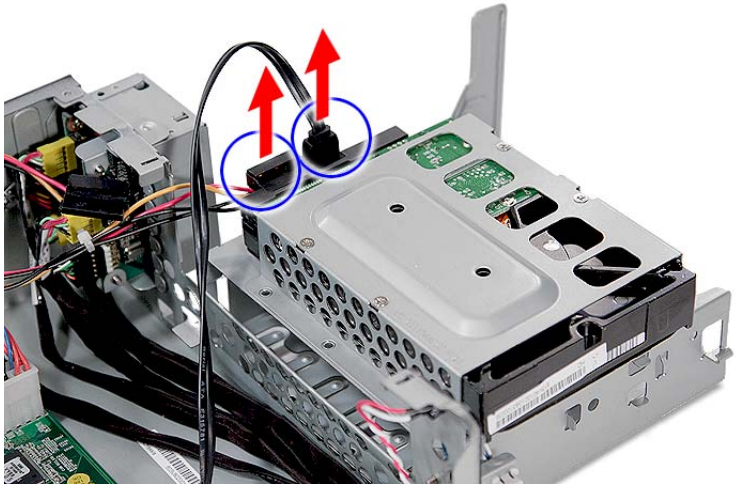


Screw (Quantity)	Color	Torque	Part No.
#6-32 L6 BZN (1)	Silver	5.5 to 6.5 kgf-cm	86.00J44.C60

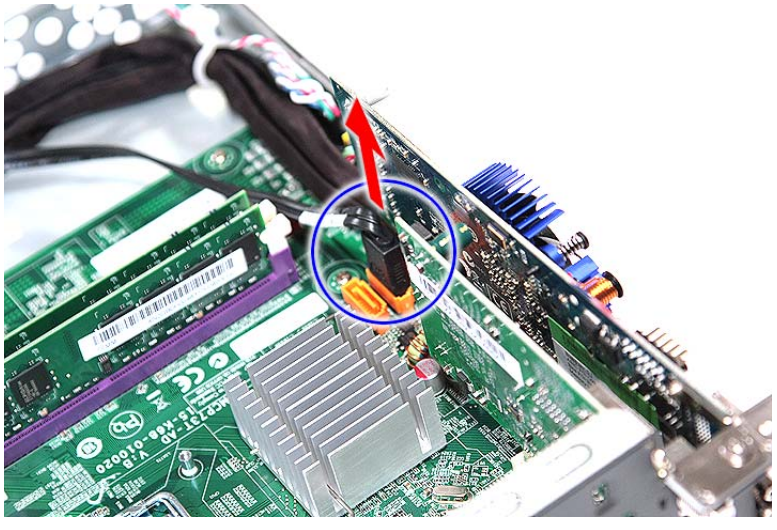
   b. Lift the bracket up and turn it over.



7. Disconnect the data and power cables from the rear of the hard drive.



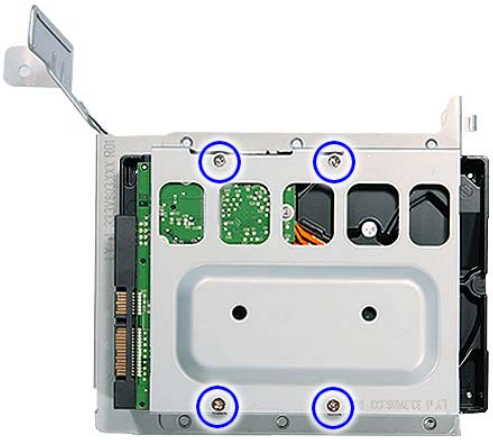
8. Disconnect the other end of the data cable from the mainboard.



9. Place the bracket on a clean, static-free work surface.

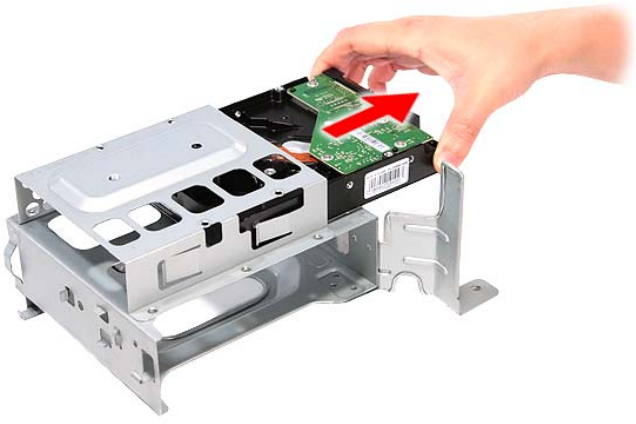
10. Remove the HDD module.

a. Remove the four screws (D) that secure the HDD module to the HDD bracket.



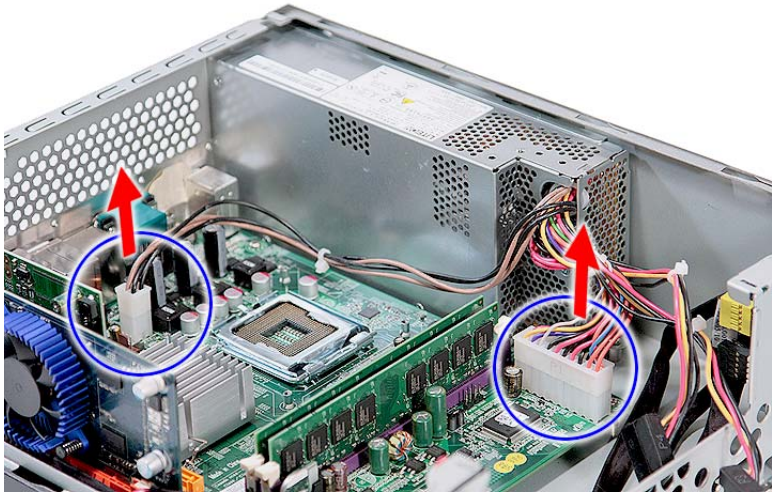
Screw (Quantity)	Color	Torque	Part No.
#6-32*3/16 NI (4)	Silver	5.5 to 6.5 kgf-cm	86.5A5B6.012

b. Slide the HDD out of the bracket.

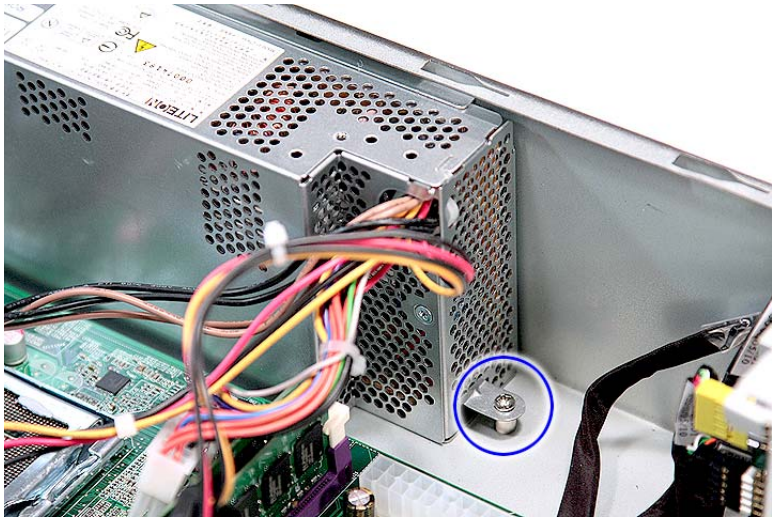


Removing the Power Supply

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. See “Removing the Hard Disk Drive” on page 35.
7. Disconnect the 4-pin and 24-pin power supply cables from the mainboard.



8. Remove the screw (C) that secures the power supply to the chassis.

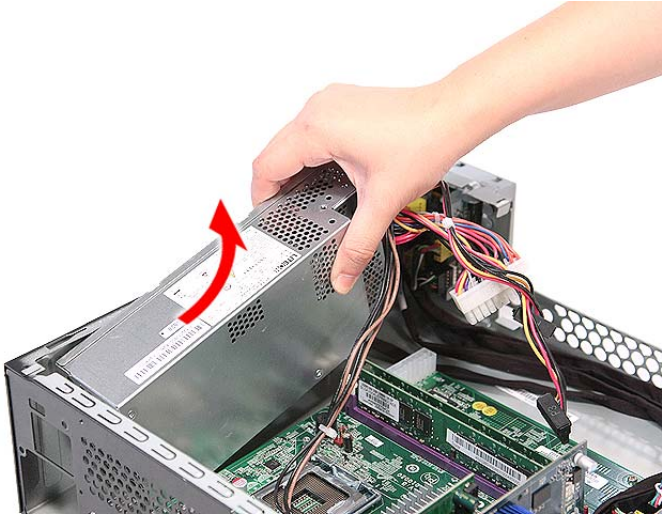


Screw (Quantity)	Color	Torque	Part No.
#6-32 L6 BZN (1)	Silver	5.7 to 6.3 kgf-cm	86.00J44.C60

9. Remove the three screws (A) that secure the power supply to the rear panel.

Screw (Quantity)	Color	Torque	Part No.
#6-32 L5 BZN (3)	Black	5.5 to 6.5 kgf-cm	86.00J07.B60

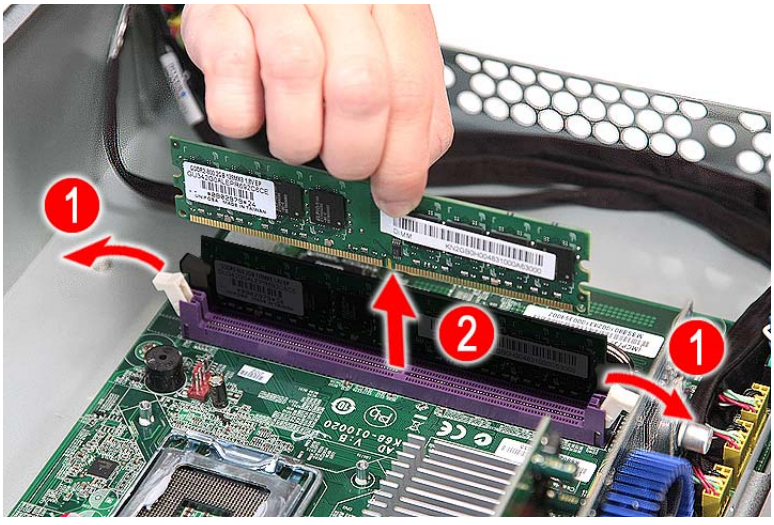
10. Lift the power supply module out of the chassis.



Removing the Memory Modules

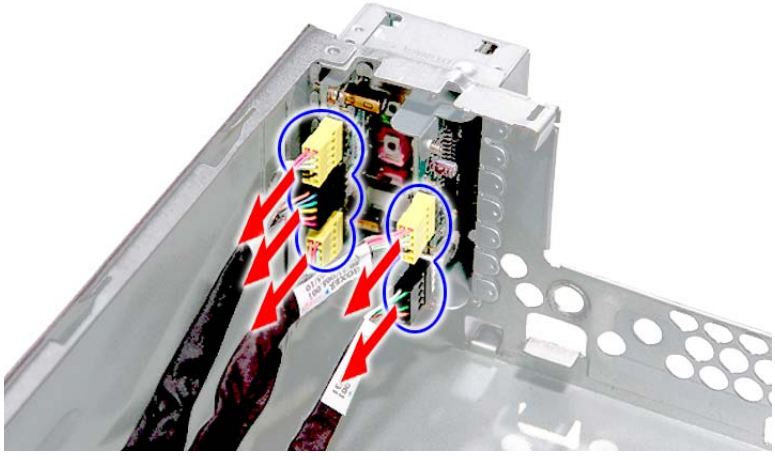
IMPORTANT: Before removing any DIMM from the memory board, make sure to create a backup file of all important data.

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. See “Removing the Hard Disk Drive” on page 35.
7. Press the holding clips on both sides of the DIMM slot outward to release the DIMM (1).
8. Gently pull the DIMM upward to pull it away from the chassis (2).

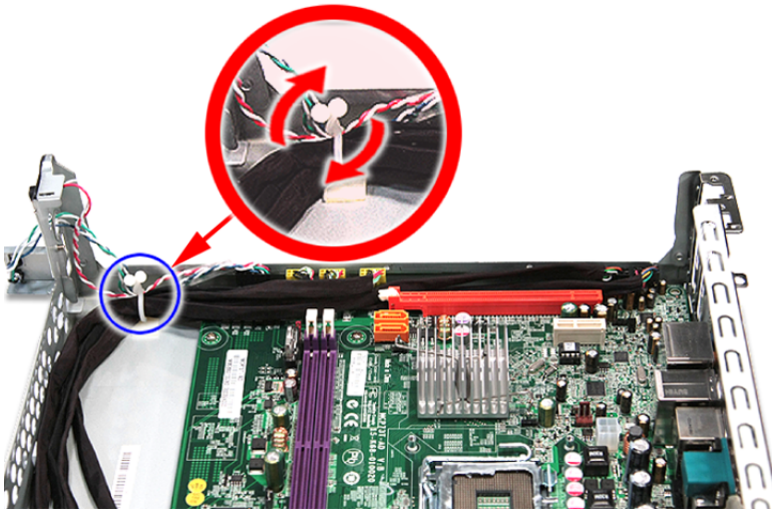


Removing the Front I/O and Card Reader Boards

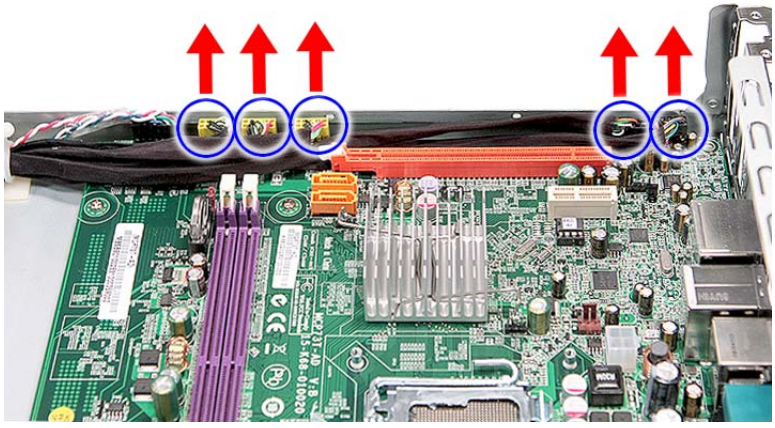
1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. See “Removing the Hard Disk Drive” on page 35.
7. See “Removing the Memory Modules” on page 40.
8. Disconnect one end of the USB, 1394, and audio cables from the I/O and card reader boards.



9. Open the cable retention clip.



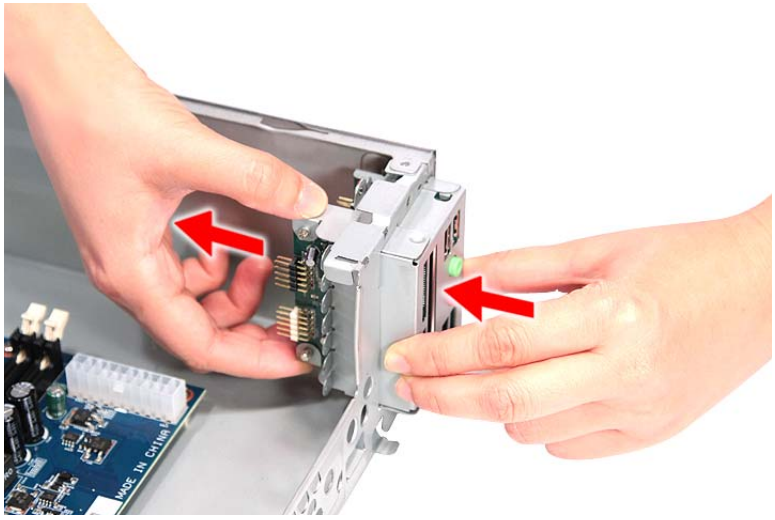
10. Disconnect the other end of the USB, 1394, and audio cables from the mainboard.



11. Remove the front I/O and card reader board bracket.
    a. Remove the two screws (D) that secure the bracket to the chassis.

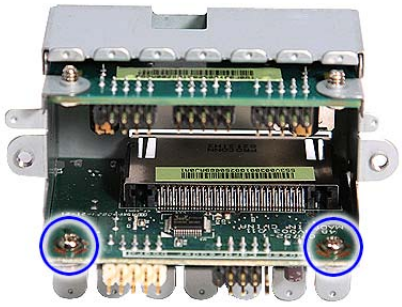
Screw (Quantity)	Color	Torque	Part No.
#6-32*3/16 NI (2)	Silver	5.5 to 6.5 kgf-cm	86.5A5B6.012

b. Push the bracket into the chassis then remove the bracket.



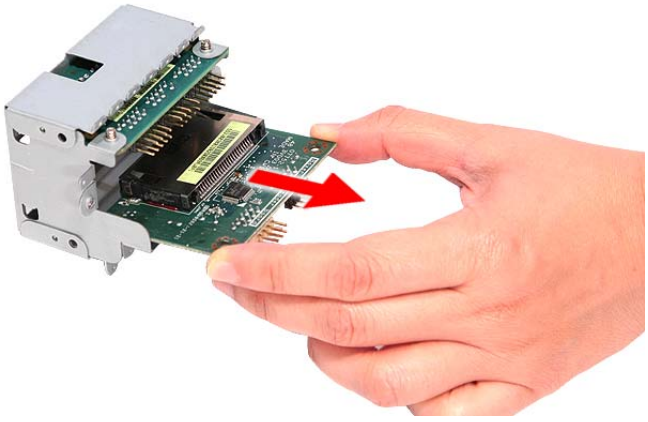
12. Remove the card reader board.

a. Remove the two screws (C) that secure the card reader board to the bracket.



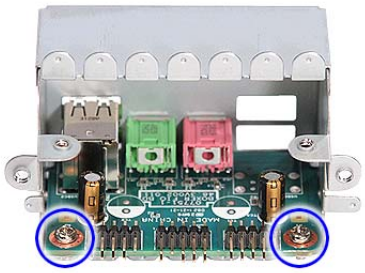
Screw (Quantity)	Color	Torque	Part No.
#6-32 L6 BZN (2)	Silver	3.5 to 4.5 kgf-cm	86.00J44.C60

b. Pull the card reader board out of the bracket.



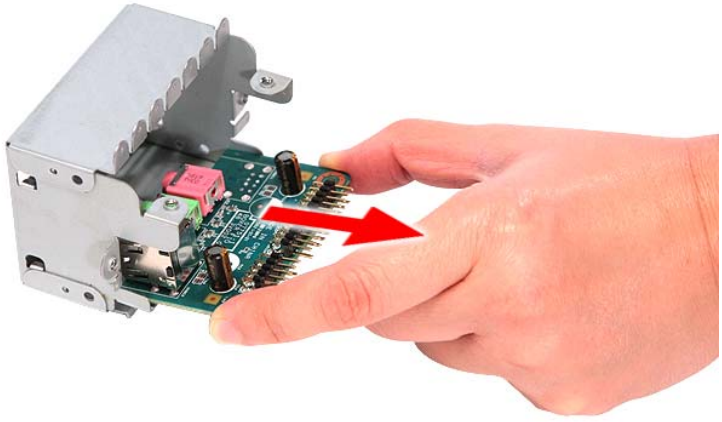
13. Remove the front I/O board.

a. Remove the two screws (C) that secure the I/O board to the bracket.



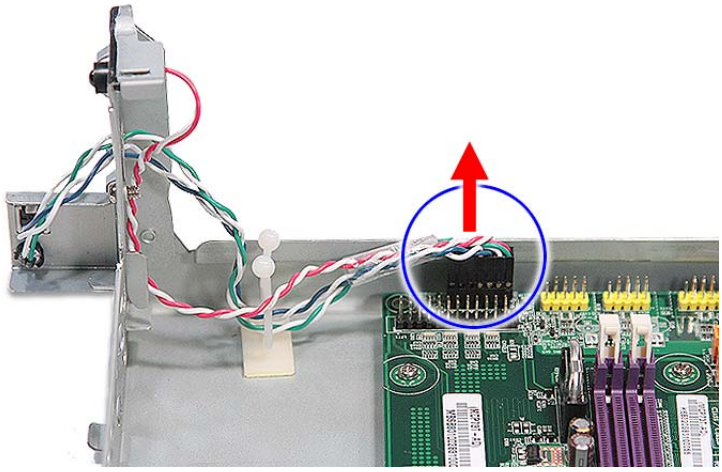
Screw (Quantity)	Color	Torque	Part No.
#6-32 L6 BZN (2)	Silver	3.5 to 4.5 kgf-cm	86.00J44.C60

b. Pull the I/O board out of the bracket.

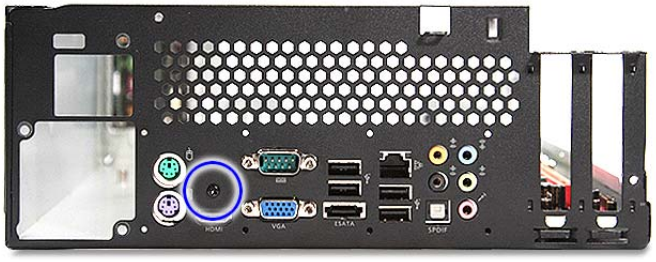


Removing the Mainboard

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. See “Removing the Hard Disk Drive” on page 35.
7. See “Removing the Memory Modules” on page 40.
8. See “Removing the Front I/O and Card Reader Boards” on page 41.
9. See “Removing the TV Tuner Card” on page 41.
10. See “Removing the Front I/O and Card Reader Boards” on page 41.
11. Disconnect the LED cable from the mainboard.

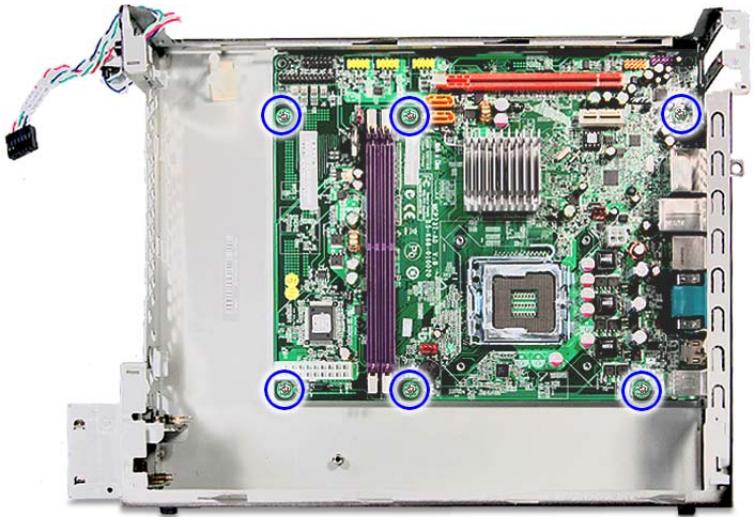


12. Remove the screw (B) on the rear panel.



Screw (Quantity)	Color	Torque	Part No.
M3xL5 (1)	Black	5.5 to 6.5 kgf-cm	86.1A324.5R0

13. Remove the six screws (C) that secure the mainboard to the chassis.

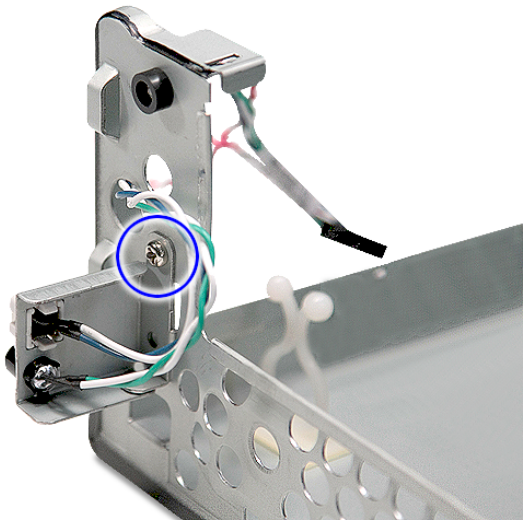


Screw (Quantity)	Color	Torque	Part No.
#6-32 L5 BZN (6)	Silver	5.7 to 6.3 kgf-cm	86.00J44.C60

14. Lift the board from the chassis.

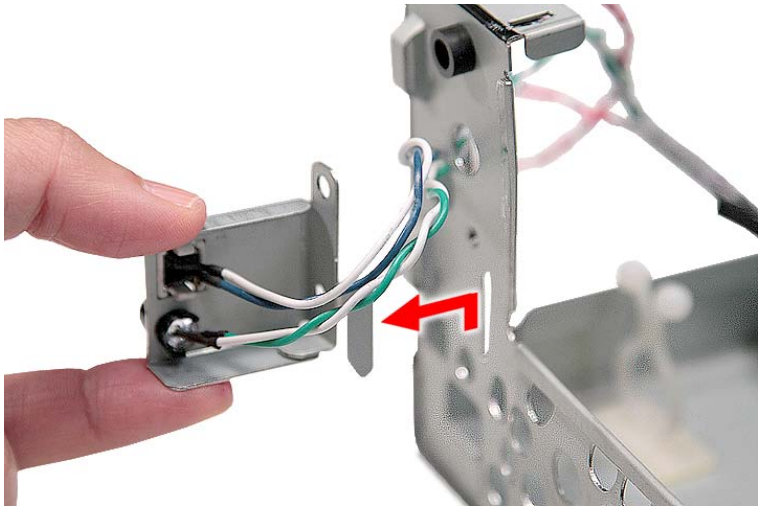
Removing the Power Switch and LED Cable Assembly

1. See “Removing the Side Panel” on page 27.
2. See “Removing the Front Bezel” on page 28.
3. See “Removing the Heat Sink Fan Assembly” on page 29.
4. See “Removing the Processor” on page 31.
5. See “Removing the Optical Drive” on page 33.
6. See “Removing the Hard Disk Drive” on page 35.
7. See “Removing the Memory Modules” on page 40.
8. See “Removing the Front I/O and Card Reader Boards” on page 41.
9. See “Removing the TV Tuner Card” on page 41.
10. See “Removing the Front I/O and Card Reader Boards” on page 41.
11. See “Removing the Mainboard” on page 45.
12. Remove the screw (C) that secures the LED bracket to the chassis.

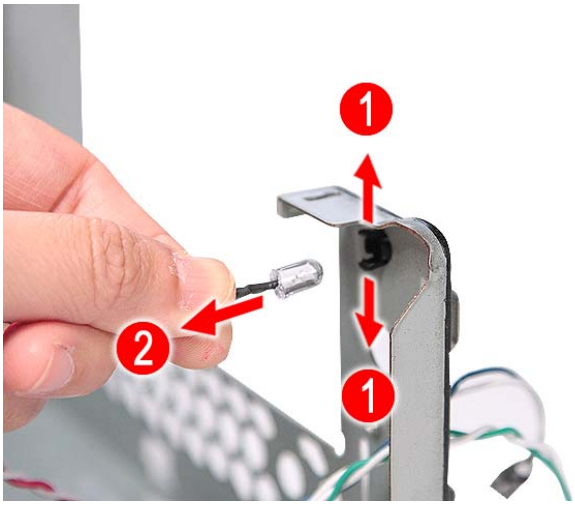


Screw (Quantity)	Color	Torque	Part No.
#6-32 L6 BZN (1)	Silver	5.7 to 6.3 kgf-cm	86.00J44.C60

13. Pull the LED bracket up and lift up from the chassis.

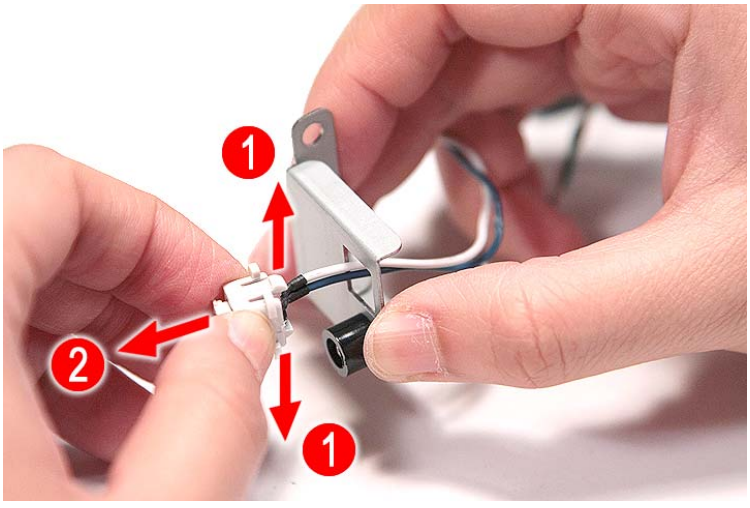


14. Release the two locking tabs (1) and gently pull the HDD LED cable out (2).

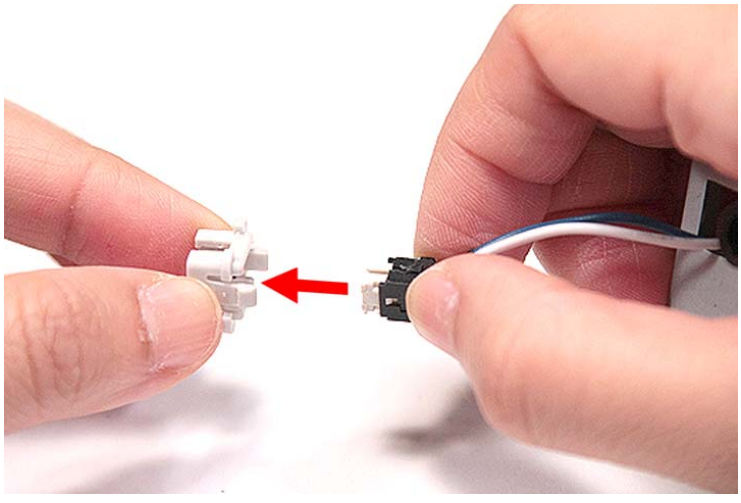


15. Remove the power switch cable.

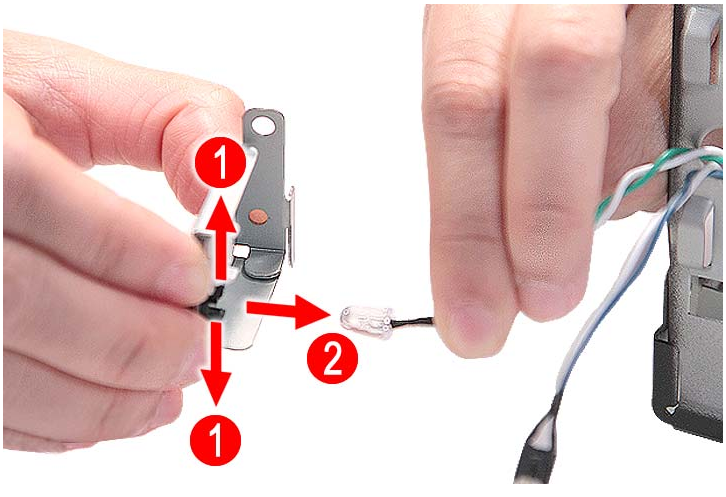
    a. Release the two locking tabs (1), pull power switch cable bracket out of the LED bracket (2).



    b. Grasp the power switch cable bracket and pull the power switch cable out of the bracket.



16. Release the two locking tabs (1) and gently pull the power LED cable out (2).



System Troubleshooting

This chapter provides instructions on how to troubleshoot system hardware problems.

Hardware Diagnostic Procedure

IMPORTANT: The diagnostic tests described in this chapter are only intended to test Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to recreate the failure by running the diagnostic tests or repeating the same operation.
3. Refer to “Power System Check” on page 52 and “Beep Codes” on page 53 to determine which corrective action to perform.

System Check Procedures

Power System Check

If the system will power on, skip this section. Refer to System External Inspection.

If the system will not power on, do the following:

- Check if the power cable is properly connected to the system and AC source.
- Check if the voltage selector switch is set to the correct voltage setting.

System External Inspection

1. Inspect the LED indicators on the front panel, which can indicate the malfunction. For the LED locations and description of their behaviour, see “System LED Indicators” on page 6.
2. Make sure that air flow is not blocked.
3. Make sure nothing in the system is making contact that could short out power.
4. If the problem is not evident, continue with System Internal Inspection.

System Internal Inspection

1. Turn off the system and all the peripherals connected to it.
2. Unplug the power cord from the power outlets.
3. Unplug the power cord from the system.
4. Unplug all peripheral cables from the system.
5. Place the system unit on a flat, stable surface.
6. Remove the system covers. For instructions on removing system covers, refer to “System Disassembly” on page 23.
7. Verify that components are properly seated.
8. Verify that all cable connectors inside the system are firmly and correctly attached to their appropriate connectors.
9. Verify that all components are Acer-qualified and supported.
10. Replace the system covers.
11. Power on the system.
12. If the problem with the system is not evident, you can try viewing the POST messages and BIOS event logs during the system startup.

Beep Codes

Beep codes are used by the BIOS to indicate a serious or fatal error to the end user. Beep codes are used when an error occurs before the system video has been initialized. Beep codes will be generated by the system board speaker, commonly referred to as the PC speaker.

AMIBIOS displays the checkpoints in the bottom right corner of the screen during POST. This display method is limited, since it only displays checkpoints that occur after the video card has been activated.

Not all computers using AMIBIOS enable this feature. In most cases, a checkpoint card is the best tool for viewing AMIBIOS checkpoints.

Beep Symptom	Cause and Description
One short beep	System is ready. System is OK.
Continuous one long beep	Memory not installed or memory error.
One long beep and two short beeps then repeat.	VGA not installed or VGA error. Graphics card error/not installed, graphics card memory error or graphics card BIOS checksum error.
One long beep then two short beep	BIOS damaged. BIOS is damaged, BIOS POST jumps to Boot Block to execute the default procedures.
Two short beeps	CMOS damaged. CMOS checksum error or CMOS battery loss occurs.

Online Support Information

This section describes online technical support services available to help you repair the desktop computer.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website at http://global.acer.com/support/index. However some information sources will require a user ID and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Support & Downloads tab you can download information materials for all of Acer notebook, desktop and server models including:

- Service guides for all models
- User's manuals
- Training materials
- BIOS updates
- Software utilities
- Spare parts lists
- Technical Announcement Bulletins (TABs)

For these purposes, we have included an Acrobat File to facilitate a hassle-free downloading of our technical materials.

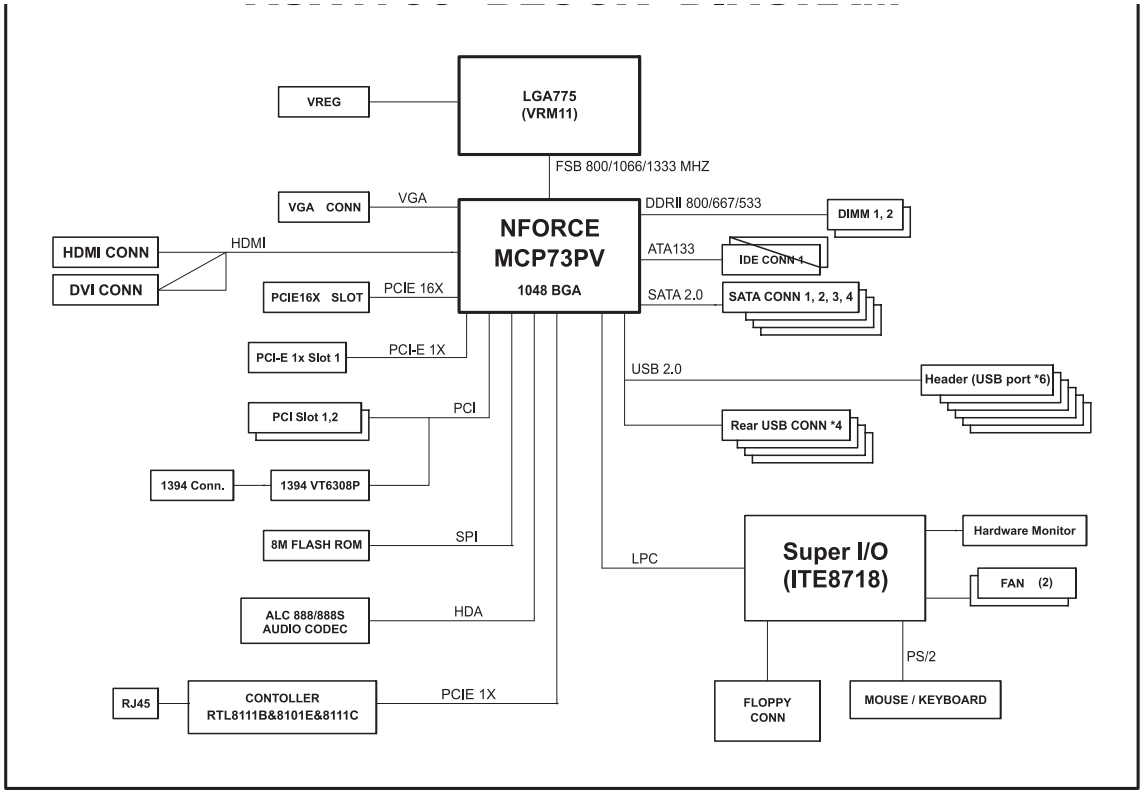
The following are also available in the Support & Downloads tab:

- Detailed information on Acer's International Traveler's Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax, and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.

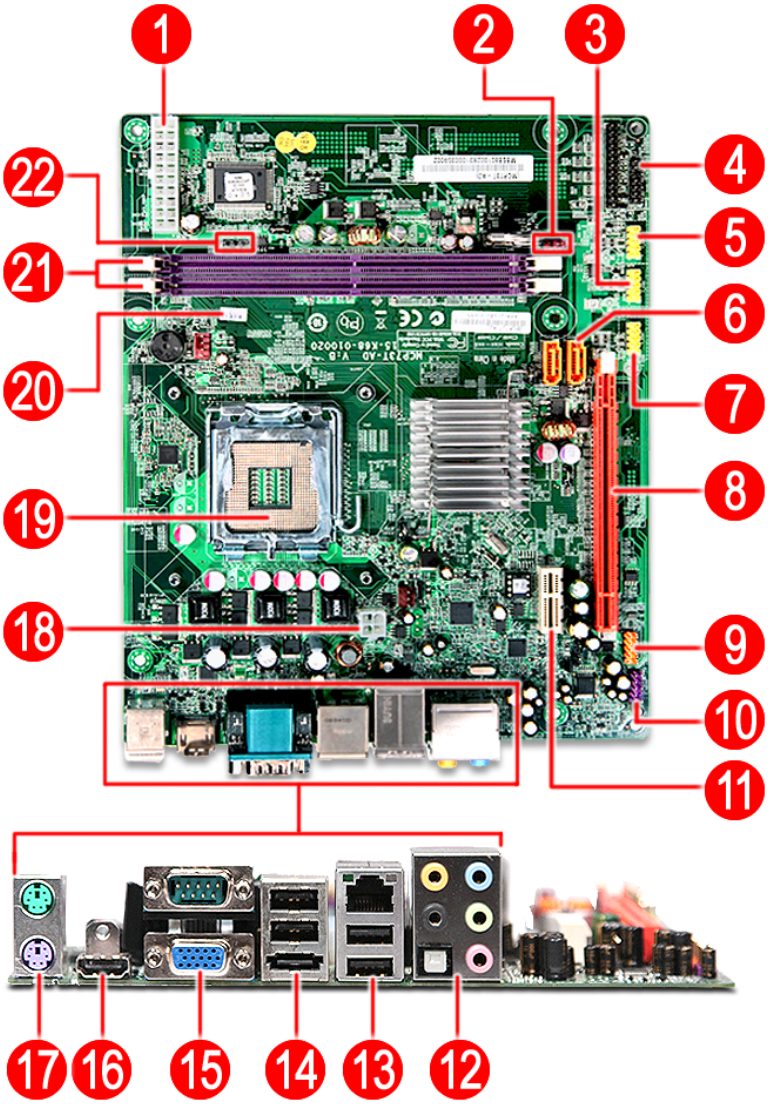
System Block Diagram and Board Layout

System Block Diagram



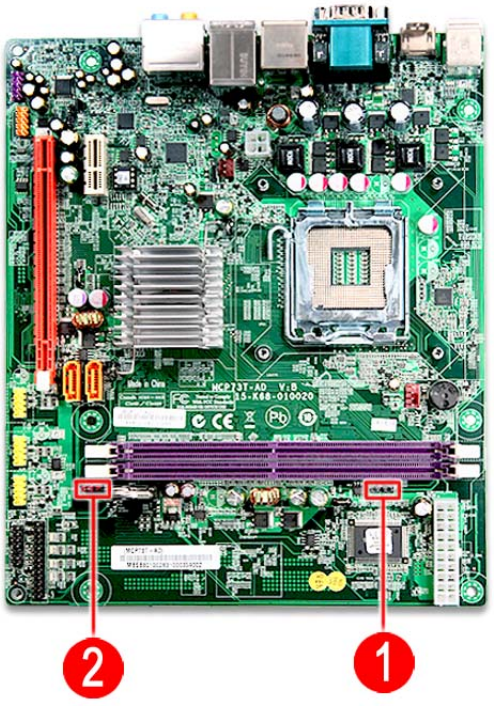
Board Layout

Mainboard



No	Code	Description	No	Code	Description
1	PWR2	24-pin ATX power connector	12	AUDIO1	Center speaker/subwoofer jack, Audio in or side speaker jack, Surround L/R speaker jack, and Headphone/analog speakers jack or front speakers jack, Microphone port, and S/PDIF port
2	CLR_CMOS1	Clear CMOS jumper	13	USBLAN1	Top: Gigabit LAN port Bottom: USB Port (2)
3	F_USB2	Front USB connector	14	USBx2 ESATA	Top: USB Port (2) Bottom: eSATA Port
4	PANEL1	LED cable connector	15	COM1 VGA1	Top: Serial Port Bottom: VGA Port
5	F_USB3	Front USB connector	16	HDMI	HDMI port
6	SATA1 and 2	SATA data cable connectors	17	PSKBM1	Top: PS2 Mouse Port Bottom: PS2 Keyboard Port
7	F_USB1	Front USB connector	18	ATX12V1	4-pin ATX power connector
8	PCIE16x	PCI Express x16 slot	19	CPU1	Processor socket
9	13941	1394 connector	20	CPU_FAN	Processor fan cable connector
10	F_AUDIO1	Front audio connector	21	DIMM1 and 2	System memory slots
11	PCIE1	PCI Express x1 slot	22	GPIO33 GPIO32	General Purpose Input and Output jumper

System Jumpers



No.	Name	Location	Default	Settings
1	General Purpose Input/Output	GPIO32		Short
		GPIO33		Open
2	Clear CMOS	CLR_CMOS1	0-1 1-2	Normal (default) Clear CMOS

FRU (Field Replaceable Unit) List

This chapter offers the FRU (Field Replaceable Unit) list in global configuration of the eMachines L1700 desktop computer. Refer to this chapter whenever ordering the parts to repair or for RMA (Return Merchandise Authorization).

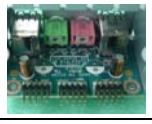
NOTES:

- When ordering FRU parts, check the most up-to-date information available on your regional web or channel. For whatever reasons a part number is changed, it will NOT be noted on the printed Service Guide. For Acer authorized service providers, your Acer office may have a different part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for service.
- To scrap or to return the defective parts, follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.
- This document will be updated as more information about the FRU list becomes available.

eMachines L1700 Exploded Diagram

NOTE: This section will be updated when more information becomes available.

eMachines L1700 FRU List

Component	QTY	Part Name	Description	Acer Part Number
Accessory				
	1	RECEIVER PHILIPS VISTA MCE TRANSCEIVER WITH 1 BLASTER OVU412000	PHILIPS VISTA MCE TRANSCEIVER	RV.11000.003
	1	RECEIVER SMK RECEIVER VISTA MCE RECEIVER WITH ONE IR BLASTER	RC RECEIVER+IR BLASTER RXX6000	RV.11000.004
	1	RECEIVER PHILIPS VISTA OVU71	PHILIPS VISTA MCE RECEIVER	RV.11000.007
	1	RECEIVER CHICONY 2.4G DANGLE RECEIVER EXTERNAL RECEIVER	RECEIVER RF DANGLE RG-0618U-99	RV.11000.010
	1	REMOTE CONTROLLER SMK VISTA MCE ICONIZED RC WITH 2 BATTERIES FOR EMEA	RC WITH 2 BATTERIES FOR EMEA	RT.11300.001
	1	REMOTE CONTROLLER SMK VISTA MCE ICONIZED RC WITH 2 BATTERIES FOR US	RC WITH 2 BATTERIES FOR US	RT.11300.002
	1	REMOTE CONTROLLER RC SMK VISTA MCE-TC EDITION WITH 2 BATTERIES	RC SMK VISTA MCE-TC EDITION	RT.11300.003
	1	REMOTE CONTROLLER RC SMK VISTA MCE-SC EDITION WITH 2 BATTERIES	RC SMK VISTA MCE-SC EDITION	RT.11300.004
	1	REMOTE CONTROLLER PHILIPS RC1534515 WITH 2 BATTERIES FOR EMEA(VISTA MCE ICONIZED)	RC WITH 2 BATTERIES FOR EMEA	RT.11300.005
	1	REMOTE CONTROLLER PHILIPS RC1534046 WITH 2 BATTERIES FOR US (VISTA MCE ICONIZED)	RC WITH 2 BATTERIES FOR US	RT.11300.006
	1	REMOTE CONTROLLER PHILIPS RC1534052/01BG VISTA MCE-TC EDITION WITH 2 BATTERIES	RC PHILLIPS VISTA MCE-TC EDITION	RT.11300.007
	1	REMOTE CONTROLLER PHILIPS RC1534051/01BG VISTA MCE-SC EDITION WITH 2 BATTERIES	RC PHILLIPS VISTA MCE-SC EDITION	RT.11300.008
	1	REMOTE CONTROL PHILIPS VISTA FOR OVU71	RC PHILIPS VISTA EMEA RT.11300	RT.11300.009
Board				
Front I/O board 	1	FRONT I/O BOARD	DA078L/BOXER FRONT I/O BD MRP	55.SAR01.001
Card reader board	1	CARD READER BOARD	DA078L/BOXER CARD READER	55.SAR01.002
	1	CARD READER BOARD	BOXER61 CARD READER WO 1394 -1	55.G1001.001
Modem card	1	MODEM CARD LITE-ON D-1156E#A10A LOW-PROFILE PCI-E 56K V.92	MODEM 56K ATX LSI UNIVERSAL	FX.10100.003

Component	QTY	Part Name	Description	Acer Part Number
TV tuner card	1	TV TUNNER CARD YUAN PE585QA PCI-E HYBRID S/W MPEG (ATSC+NTSC) W/LP BRKT	TV TUNER CARD PE585QA PCI-E HY	TU.10500.010
	1	TV TUNNER CARD HAUPPAUGE HVR-1200 PCIE HYBRID DVB-T S/W ENCORDER W/LP BRKT	HAUPPAGUE WIN-TV HVR-1200 PCIE	TU.10500.011
Wireless LAN board	1	WIRELESS LAN BOARD 802.11BGN LITEON WN7600R	WLAN 802.11BGN RALINK MC 1*2	NI.10200.009
	1	PRO-NETS WU61RL USB RALINK CHIPSET 802.11 B/G	WL USB DONGLE 802.11G WU61RL	NI.10200.002
VGA card	1	VGA CARD 9300GE 256MB HDMI BOARD(ACTIVE+LP BRACKET)	VGA CARD 9300GE 256MB HDMI	VG.PC93G.EA2
	1	VGA CARD 3450GE 256MB HDMI BOARD(ACTIVE+LP BRACKET)	VGA CARD 3450 256MB HDMI BOARD	VG.APC34.5A2
Cable				
Card reader cable	1	CARD READER CABLE	C.A. 1394 BOXER VSO	50.SAR01.002
	1	CARD READER CABLE	C.A. 1394 BOXER95	50.SBF01.001
USB board cable	1	USB BOARD CABLE	C.A. USB BOXER VSO	50.SAR01.002
		USB BOARD CABLE	C.A. USB BOXER95	50.SBF01.002
Audio board cable	1	AUDIO BOARD CABLE	C.A. AUDIO BOXER VSO	50.SAR01.003
	1	AUDIO BOARD CABLE	C.A. AUDIO BOXER95	50.SBF01.003
SATA ODD cable	1	SATA ODD CABLE (SHORT)	C.A. SATA ODD PUG	50.G1001.001
SATA HDD cable	1	SATA HDD CABLE (LONG)	C.A. SATA HDD BOXER VSO	50.SAR01.005
	1	SATA HDD CABLE	C.A. HDD-SATA BOXER95	50.SBF01.004
Power cord	1	POWER CORD 1800MM 250V EURO	POWER CORD 1800MM 250V EURO	27.01518.0J1
Power and LED cable	1	POWER&LED CABLE	C.A. LED-SWITCH BOXER VSO	50.SAR01.006
Case/Cover/Bracket Assembly				
Chassis with power and LED cable	1	CHASSIS W/POWER&LED BOARD CABLE&CHASSIS&HDD&ODD COVER BRACKET&UPPER CASE	ASSY MAIN-CHASSIS BOXER2	60.SBF01.001
L case	1	CHASSIS W/POWER&LED CABLE	ASSY LCASE-ASM BOXER2	60.3V804.001
HDD and ODD cover bracket	1	HDD&ODD COVER BRACKET	ASSY BRKT-ODD-HDD BOXER2	60.3V806.001
Upper case	1	UPPER CASE	ASSY BRKT-UCASE BOXER PUG	60.3V411.001
Front bezel	1	FRONT BEZEL W/LOGO PLATE	ASSY FRONT-BEZEL-ASM BOXER2	60.SBF01.004
Dummy bracket	1	DUMMY BRACKET	BRKT L/P DUMMY LY	60.G1001.001
I/O dummy bracket	1	IO DUMMY COVER BRACKET	BRKT F-IO BOXER2	60.SBF01.005

Component	QTY	Part Name	Description	Acer Part Number
CPU				
	1	CPU INTEL CELERON 450 2.XG 512K 800FSB 35W HH80557RG049512 891507 SLAFZ	IC CPU CONROE LITE 450 2.2G	KC.D0001.450
	1	CPU INTEL CELERON DUA CORE E1200 1.60G 512K 800FSB 65W M0 HH80557PG025D 893843 SLAQW	IC CPU CONROE LITE E1200 1.6G	KC.12001.CDE
	1	CPU INTEL PENTIUM DUAL CORE E2200 2.2G 1M 800FSB 65W M-0 HH80557PG0491M 890242 SLA8X	IC CPU CONROE E2200 2.2G	KC.22001.DEM
	1	CPU INTEL PENTIUM DUAL CORE E2220 2.4G 1M 800FSB 65W M-0 HH80557PG0561M 890240 SLA8W	IC CPU CONROE E2220 2.4G	KC.22201.DEM
	1	CPU INTEL PENTIUM DUAL CORE E2180 2.0G 1M 800FSB 65W M-0	PT DUALCORE E2180 2.0G 1M 800M	KC.21801.DEM
	1	CPU INTEL PENTIUM DUAL CORE E5200 2.5G 2M 800FSB 65W EU80571PG0602M 896940 SLAY7	IC CPU CONROE E5200 2.5G	KC.52001.DEM
	1	CPU INTEL CORE2DUO E4700 2.6G 2M 800FSB 65W G0 HH80557PG0642M 892986 SLALT	IC CPU CONROE E4700 2.6G	KC.47001.DE0
	1	CPU INTEL CORE2DUO E7200 2.53G 3M 1066FSB 65W M0 EU80571PH0613M 893550 SLAPC	IC CPU CONROE E7200 2.53G PGA	KC.72001.DE0
	1	CPU INTEL CORE2DUO E8400 3.0G 6M 1333FSB 65W C0 EU80570PJ0806M 893557 SLAPL	IC CPU WOLFDALE E8400 3.0G PGA	KC.84001.DE0
	1	CPU INTEL CORE2QUAD Q6600 LGA 2.4G 2X4M 1066 775 95W G-0	IC CPU KENTSFIELD Q6600 2.4G	KC.66001.QQG
	1	CPU INTEL CORE2QUAD Q6700 LGA 2.66G 2X4M 1066 775 95W G-0	IC CPU KENTSFIELD Q6700 2.66G	KC.67001.QQG
	1	CPU INTEL CORE2QUAD Q8200 2.33G 4M 1333FSB 95W M1 EU80580PJ0534MN 898065 SLB5M	IC CPU YORKFIELD Q8200 2.33G	KC.82001.QQ0
	1	CPU INTEL CORE2QUAD Q9300 PGA 2.5G 1333 775 95W 6M	IC CPU YORKFIELD Q9300 2.5G	KC.93001.QQ0
	1	CPU INTEL CORE2QUAD Q9400 2.66G 6M 1333FSB 95W R0 AT80580PJ0676M 898380 SLB6B	IC CPU YORKFIELD Q9400 2.66G	KC.94001.QQ0
	1	CPU INTEL CORE2QUAD Q9450 PGA 2.66G 1333 775 95W 12M	IC CPU YORKFIELD Q9450 2.66G	KC.94501.QQ0
	1	CPU INTEL CORE2QUAD Q9550 PGA 2.83G 1333 775 95W 12M	IC CPU YORKFIELD Q9550 2.83G	KC.95501.QQ0
	1	CPU INTEL 3.0G YORKFIELD Q9650 AT80569PJ080N 898652 SLB8W	IC CPU YORKFIELD Q9650 3.0G	KC.96501.QQE
Optical drive				

Component	QTY	Part Name	Description	Acer Part Number
DVD-RW drive	1	ODD HLDS SUPER-MULTI DRIVE HH LABELFLASH 16X GH-15F LF BLACK BEZEL SATA	S-MULTI HH HLDS GH-15F LF	KU.0160D.043
	1	ODD SONY SUPER-MULTI DRIVE HH 16X AD-7203S LF SATA	S-MULTI HH SONY AD-7203S LF	KU.0160E.015
	1	DVD-RW PHILIPS SUPER-MULTI DRIVE HH DL 16X DH-16A6S LF BLACK BEZEL	S-MUL HH SATA PLDS DH-16A6S	KU.0160F.005
DVD-ROM drive	1	DVD-ROM DRIVE 16X PHIPLIS DH-16D2S LF W/O BEZEL SATA	DVDROM SATA PLDS/DH-16D2S OSCA	KV.01609.003
	1	DVD-ROM DRIVE 16X HLDS GDR-H20N LF BALCK BEZEL SATA	DVDROM SATA HLDS/GDR-H20N PERS	KV.0160D.014
Hard disk drive				
	1	HDD 160GB 3.5” 7200RPM SATA II WD WD1600AAJS-22WAA0	HDD 160GB WD WD1600AAJS-22WAA0	KH.16008.023
	1	HDD 160GB 3.5" 7200RPM SATA II SEAGATE ST3160815AS LF F/W:3.AAE	HDD 160GB SGT ST3160815AS	KH.16001.031
	1	HDD 160GB 3.5" 7200RPM SATA II HGST HDS721616PLA380 LF F/W:BEA	HGST 160GB SATA 8MB 7200 NCQ	KH.16007.017
	1	HDD 320GB 3.5" 7200RPM WD WD3200AAJS-22B4A0 XL320S SATA LF	HDD 320GB WD WD3200AAJS-22B4A0	KH.32008.014
	1	HDD 320GB HGST HDP725032GLA380 GEMINI SATA II LF F/W:52A	HDD 320GB HGST HDP725032GLA380	KH.32007.003
	1	HDD 320GB 3.5" 7200RPM SATA II SEAGATE ST3320813AS	HDD SEAGATE 320GB ST3320813AS	KH.32001.009
	1	HDD 500GB 3.5" 7200RPM SATA II HGST HDP725050GLA380 LF F/W:52A	HDD 500GB HGST HDP725050GLA380	KH.50007.003
	1	HDD 500GB 3.5" 7200RPM SATA II WD WD5000AAJS-22A8B0 LF F/W:01.03A01	HDD 500GB WD5000AAJS-22A8B0	KH.50008.009
	1	HDD 500GB 3.5" 7200RPM SATA II SEAGATE ST3500820AS	HDD 500GB SEAGAT ST3500820AS	KH.50001.005
	1	HDD WD 3.5" 7200RPM 640GB WD6400AAKS-22A7B0 XL320M SATA II 16MB LF F/W:01.03B01	HDD 640GB WD WD6400AAKS-22A7B0	KH.64008.001
Heat sink				
	1	CPU COOLER WITH FAN LGA775 TMDC6 (TMD06 W/O FAN DUCT)	ASSY COOLER LGA775 ATX	HI.10800.012

Keyboard

Component	QTY	Part Name	Description	Acer Part Number
	1	KEYBOARD PS2 105KEY CHICONY KB-07596F12552V FRENCH BLACK	KB PS2 KB-0759 FRENCH BLACK105	KB.PS203.109
	1	KEYBOARD PS2 104KEY CHICONY KB-07593S32552V RUSSIAN BLACK	KB PS2 KB-0759 RUSSIAN BLACK 1	KB.PS203.121
	1	KEYBOARD PS2 104KEY CHICONY KB-07593US2552V US2552V US BLAC	KB PS2 KB-07593US2552V US BLAC	KB.PS203.096
	1	KEYBOARD PS2 104KEY CHICONY KB-07593RD2552V TRADITIONAL CHINESE BLACK	KB PS2 KB-0759 T-CN BLACK 104K	KB.PS203.097
	1	KEYBOARD PS2 104KEY CHICONY KB-07593RE2552V SIMPLE CHINESE BLACK	KB PS2 KB-0759 S-CN BLACK 104K	KB.PS203.098
	1	KEYBOARD PS2 104KEY CHICONY KB-07593U42552V US-I BLACK	KB PS2 KB-0759 US-I BLACK 104K	KB.PS203.099
	1	KEYBOARD PS2 104KEY CHICONY KB-07593A02552V ARABIC/ENGLISH	KB PS2 KB-0759 ARABIC/ENGLISH	KB.PS203.100
	1	KEYBOARD PS2 104KEY CHICONY KB-07593T02552V THAI BLACK	KB PS2 KB-0759 THAI BLACK 104K	KB.PS203.101
	1	KEYBOARD PS2 104KEY CHICONY KB-07593T02552V THAI BLACK	KB PS2 KB-0759 THAI BLACK 104K	KB.PS203.101
	1	KEYBOARD PS2 105KEY CHICONY KB-07596E02552V SPANISH BLACK	KB PS2 KB-0759 SPANISH BLACK 1	KB.PS203.102
	1	KEYBOARD PS2 105KEY CHICONY KB-07596P02552V PORTUGUESE BLACK	KB PS2 KB-0759 PORTUGUESE BLAC	KB.PS203.103
	1	KEYBOARD PS2 105KEY CHICONY KB-07596CA2552V CANADA/FRENCH	KB PS2 KB-0759 CA-FRENCH BLACK	KB.PS203.104
	1	KEYBOARD PS2 107KEY CHICONY KB-07598PA2552V BRAZILIAN PORTU	KB PS2 KB-0759 BRAZILIAN PORTU	KB.PS203.105
	1	KEYBOARD PS2 109KEY CHICONY KB-07590J02552V JAPANESE BLACK	KB PS2 KB-0759 JAPANESE BLACK	KB.PS203.106
	1	KEYBOARD PS2 105KEY CHICONY KB-07596D12552V GERMAN BLACK	KB PS2 KB-0759 GERMAN BLACK 10	KB.PS203.107
	1	KEYBOARD PS2 105KEY CHICONY KB-07596I02552V ITALIAN BLACK	KB PS2 KB-0759 ITALIAN BLACK 1	KB.PS203.108
	1	KEYBOARD PS2 105KEY CHIOCNY KB-07596S02552V SWEDISH BLACK	KB PS2 KB-0759 SWEDISH BLACK 1	KB.PS203.110
	1	KEYBOARD PS2 105KEY CHICONY KB-07596GB2552V UK BLACK	KB PS2 KB-0759 UK BLACK 105KS	KB.PS203.111

Component	QTY	Part Name	Description	Acer Part Number
	1	KEYBOARD PS2 105KEY CHICONY KB-07596NL2552V DUTCH BLACK	KB PS2 KB-0759 DUTCH BLACK 105	KB.PS203.112
	1	KEYBOARD PS2 105KEY CHICONY KB-07596CH2552V SWISS/G BLACK	KB PS2 KB-0759 SWISS/G BLACK 1	KB.PS203.113
	1	KEYBOARD PS2 105KEY CHICONY KB-07596B02552V BELGIUM BLACK	KB PS2 KB-0759 BELGIUM BLACK 1	KB.PS203.114
	1	KEYBOARD PS2 105KEY CHICONY KB-07596IC2552V ICELANDIC BLACK	KB PS2 KB-0759 ICELANDIC BLACK	KB.PS203.115
	1	KEYBOARD PS2 105KEY CHICONY KB-07596N02552V NORWEGIAN BLACK	KB PS2 KB-0759 NORWEGIAN BLACK	KB.PS203.116
	1	KEYBOARD PS2 104KEY CHIOCNY KB-07593HB2552V HEBREW BLACK	KB PS2 KB-0759 HEBREW BLACK104	KB.PS203.117
	1	KEYBOARD PS2 105KEY CHICONY KB-07596PL2552V POLISH BLACK	KB PS2 KB-0759 POLISH BLACK105	KB.PS203.118
	1	KEYBOARD PS2 105KEY CHICONY KB-07596YU2552V SLOVENIAN BLACK	KB PS2 KB-0759 SLOVENIAN BLACK	KB.PS203.119
	1	KEYBOARD PS2 105KEY CHICONY KB-07596CL2552V SLOVAK BLACK	KB PS2 KB-0759 SLOVAK BLACK105	KB.PS203.120
	1	KEYBOARD PS2 105KEY CHIOCNY KB-07596HU2552V HUNGARIAN BLACK	KB PS2 KB-0759 HUNGARIAN BLACK	KB.PS203.122
	1	KEYBOARD PS2 104KEY CHICONY KB-07593GR2552V GREEK BLACK	KB PS2 KB-0759 GREEK BLACK 104	KB.PS203.123
	1	KEYBOARD PS2 105KEY CHICONY KB-07596DK2552V DANISH BLACK	KB PS2 KB-0759 DANISH BLACK105	KB.PS203.124
	1	KEYBOARD PS2 104KEY CHICONY KB-07593C02552V CZECH BLACK	KB PS2 KB-0759 CZECH BLACK 104	KB.PS203.125
	1	KEYBOARD PS2 105KEY CHICONY KB-07596R02552V ROMANIAN BLACK	KB PS2 KB-0759 ROMANIAN BLACK	KB.PS203.126
	1	KEYBOARD PS2 105KEY CHICONY KB-07596TF2552V TURKISH BLACK	KB PS2 KB-0759 TURKISH BLACK 1	KB.PS203.127
	1	KEYBOARD PS2 105KEY CHICONY KB-07596LA2552V SPANISH LATIN	KB PS2 KB-0759 SPANISH LATIN	KB.PS203.128
	1	KEYBOARD PS2 105KEY CHICONY KB-07596TQ2552V TURKISH-Q BLACK	KB PS2 KB-0759 TURKISH-Q BLACK	KB.PS203.129
	1	KEYBOARD USB 104KEY CHICONY KU-07603US2552V STANDARD WITH EKEY BLACK	KEYBOARD CHICONY KU-0760 USB S	KB.USB03.062

Component	QTY	Part Name	Description	Acer Part Number
	1	KEYBOARD USB 104KEY CHICONY KU-07603RD2552V T-CN BLACK	KB USB KU-0760 T-CN BLACK 104K	KB.USB03.063
	1	KEYBOARD USB 104KEY CHICONY KU-07603RE2552V S-CN BLACK	KB USB KU-0760 S-CN BLACK 104K	KB.USB03.064
	1	KEYBOARD USB 104KEY CHICONY KU-07603U42552V US INTERNATIONAL BLACK	KB USB KU-0760 US-I BLACK 104K	KB.USB03.065
	1	KEYBOARD USB 104KEY CREATIX KU-07603A02552V ARABIC/ ENGLISH	KB USB KU-0760 ARABIC/ ENGLISH	KB.USB03.066
	1	KEYBOARD USB 104KEY CHICONY KU-07603T02552V THAI BLACK	KB USB KU-0760 THAI BLACK 104K	KB.USB03.067
	1	KEYBOARD USB 105KEY CHICONY KU-07606E02552V SPANISH BLACK	KB USB KU-0760 SPANISH BLACK 1	KB.USB03.068
	1	KEYBOARD USB 105KEY CHICONY KU-07606P02552V PORTUGUESE BLAC	KB USB KU-0760 PORTUGUESE BLAC	KB.USB03.069
	1	KEYBOARD USB 105KEY CHICONY KU-07606CA2552V CANADIAN FRENCH BLACK	KB USB KU-0760 CA-FRENCH BLACK	KB.USB03.070
	1	KEYBOARD USB 107KEY CHICONY KU-07608PA2552V BRAZILIAN PORTU	KB USB KU-0760 BRAZILIAN PORTU	KB.USB03.071
	1	KEYBOARD USB 109KEY CHICONY KU-07600J02552V JAPANESE BLACK	KB USB KU-0760 JAPANESE BLACK	KB.USB03.072
	1	KEYBOARD USB 105KEY CHICONY KU-07606D12552V GERMAN BLACK	KB USB KU-0760 GERMAN BLACK 10	KB.USB03.073
	1	KEYBOARD USB 105KEY CHICONY KU-07606I02552V ITALIAN BLACK	KB USB KU-0760 ITALIAN BLACK 1	KB.USB03.074
	1	KEYBOARD USB 105KEY CHICONY KU-07606F12552V FRENCH BLACK	KB USB KU-0760 FRENCH BLACK 10	KB.USB03.075
	1	KEYBOARD USB 105KEY CHIOCNY KU-07606S02552V SWEDISH BLACK	KB USB KU-0760 SWEDISH BLACK 1	KB.USB03.076
	1	KEYBOARD USB 105KEY CHICONY KU-07606GB2552V UK BLACK	KB USB KU-0760 UK BLACK 105KS	KB.USB03.077
	1	KEYBOARD USB 105KEY CHICONY KU-07606NL2552V DUTCH BLACK	KB USB KU-0760 DUTCH BLACK 105	KB.USB03.078
	1	KEYBOARD USB 105KEY CHICONY KU-07606CH2552V SWISS/G BLACK	KB USB KU-0760 SWISS/G BLACK 1	KB.USB03.079
	1	KEYBOARD USB 105KEY CHICONY KU-07606B02552V BELGIUM BLACK	KB USB KU-0760 BELGIUM BLACK 1	KB.USB03.080

Component	QTY	Part Name	Description	Acer Part Number
	1	KEYBOARD USB 105KEY CHICONY KU-07606IC2552V ICELANDIC	KB USB KU-0760 ICELANDIC BLACK	KB.USB03.081
	1	KEYBOARD USB 105KEY CHICONY KU-07606N02552V NORWEGIAN BLACK	KB USB KU-0760 NORWEGIAN BLACK	KB.USB03.082
	1	KEYBOARD USB 104KEY CHIOCNY KU-07603HB2552V HEBREW BLACK	KB USB KU-0760 HEBREW BLACK 10	KB.USB03.083
	1	KEYBOARD USB 105KEY CHICONY KU-07606PL2552V POLISH BLACK	KB USB KU-0760 POLISH BLACK 10	KB.USB03.084
	1	KEYBOARD USB 105KEY CHICONY KU-07606YU2552V SLOVENIAN BLACK	KB USB KU-0760 SLOVENIAN BLACK	KB.USB03.085
	1	KEYBOARD USB 105KEY CHICONY KU-07606CL2552V SLOVAK BLACK	KB USB KU-0760 SLOVAK BLACK 10	KB.USB03.086
	1	KEYBOARD USB 104KEY CHICONY KU-07603S32552V RUSSIAN BLACK	KB USB KU-0760 RUSSIAN BLACK 1	KB.USB03.087
	1	KEYBOARD USB 105KEY CHIOCNY KU-07606HU2552V HUNGARIANBLACK	KB USB KU-0760 HUNGARIANBLACK	KB.USB03.088
	1	KEYBOARD USB 104KEY CHICONY KU-07603GR2552V GREEK BLACK	KB USB KU-0760 GREEK BLACK 104	KB.USB03.089
	1	KEYBOARD USB 105KEY CHICONY KU-07606DK2552V DANISH BLACK	KB USB KU-0760 DANISH BLACK 10	KB.USB03.090
	1	KEYBOARD USB 104KEY CHICONY KU-07603C02552V CZECH BLACK	KB USB KU-0760 CZECH BLACK 104	KB.USB03.091
	1	KEYBOARD USB 105KEY CHICONY KU-07606R02552V ROMANIAN BLACK	KB USB KU-0760 ROMANIAN BLACK	KB.USB03.092
	1	KEYBOARD USB 105KEY CHICONY KU-07606TF2552V TURKISH BLACK	KB USB KU-0760 TURKISH BLACK 1	KB.USB03.093
	1	KEYBOARD USB 105KEY CHICONY KU-07606LA2552V SPANISH TUALATIN INTEL	KB USB KU-0760 SPANISH LATIN B	KB.USB03.094
	1	KEYBOARD USB 105KEY CHICONY KU-07606LA2552V SPANISH TUALATIN INTEL	KB USB KU-0760 SPANISH LATIN B	KB.USB03.094
	1	KEYBOARD USB 105KEY CHICONY KU-07606TQ2552V TURKISH-Q BLACK	KB USB KU-0760 TURKISH-Q BLACK	KB.USB03.095
	1	KEYBOARD WIRELESS 104KEY CHICONY KG-07663US2552V 2.4G US	KB WL KG-07663US2552V US 104K	KB.RF403.027

Component	QTY	Part Name	Description	Acer Part Number
Mainboard				
	1	MAINBOARD PUG ENMCP73VE NVIDIA MCP73PVE W/1394 LF W/ RM	ENMCP73PV NVIDIA MCP73PV W/ 139	MB.SB801.002
Memory				
	1	MEMORY UNIFOSA UNB-DIMM DDRII 800MHZ 1GB GU341G0ALEPR6B2C6CE LF	DIMM 1G GU341G0ALEPR6B2C6CE	KN.1GB0H.009
	1	MEMORY NANYA UNB-DIMM DDRII 800MHZ 1GB NT1GT64U88D0BY-AD	DIMM 1G NT1GT64U88D0BY-AD	KN.1GB03.024
	1	MEMORY TRANSCEND UNB-DIMM DDRII 800MHZ 1GB JM800QLU-1G	DIMM 1G JM800QLU-1G	KN.1GB0F.002
	1	MEMORY APACER UNB-DIMM DDRII 800MHZ 1GB 75.073AA.G00	DIMM 1G 75.073AA.G00	KN.1GB01.018
		MEMORY NANYA UNB-DIMM DDRII 800 2GB NT2GT64U8HD0BY-AD LF	DIMM 2G NT2GT64U8HD0BY-AD	KN.2GB03.009
		MEMORY APACER UNB-DIMM DDRII 800MHZ 2GB 75.A73AA.G03	DIMM 2G 75.A73AA.G03	KN.2GB01.013
		MEMORY TRANSCEND UNB-DIMM DDRII 800 2GB JM800QLU-2G LF	DIMM 2G JM800QLU-2G	KN.2GB0F.001
	1	MEMORY UNIFOSA UNB-DIMM DDRII 800 2GB GU342G0ALEPR692C6CE LF	DIMM 2G GU342G0ALEPR692C6CE	KN.2GB0H.004
Mouse				
	1	MOUSE PS2 OPT SM-9620 LITEON SM-30600-00W	MOUSE PS2 OPT SM-9620 LITEON	MS.11200.017
	1	LOGITECH 0810_PS2 OPTICAL MOUSE PS2 M-SBR-ACR2	MOUSE PS2 OPT 910-000849 LOGI	MS.11200.013
		LOGITECH 0810_USB OPTICAL MOUSE USB M-UAY-ACR2	MOUSE USB OPT 910-000850 LOGI	MS.11200.014
		MOUSE USB OPT SM-9625 LITEON SM-30700-00W	MOUSE USB OPT SM-9625 LITEON	MS.11200.018
		MOUSE MG-0766T-657 CHICONY RF2.4G	MOUSE WL MG-0766T-657 CHICONY	MS.11200.015
Power supply				
	1	POWER SUPPLY 220W PFC 230V LITEON PE-5221-08AP-ROHS	SPS 220W PFC 230V LITEON PE-52	PY.2200B.002
	1	POWER SUPPLY 220W PFC 230V DELTA DPS-220UB-1 A	SPS 220W PFC 230V DPS-220UB-	PY.22009.003
	1	POWER SUPPLY 220W 115VAC/ 230V DELTA NON-PFC DPS-220UB A	SPS 220W 115VAC/230V NPFC DPS-	PY.22009.002
	1	POWER SUPPLY 220W NON-PFC 115V/230V LITEON PS-5221-06A1-ROHS	SPS 220W NPFC 115V/230V LITEON	PY.2200B.001

Component	QTY	Part Name	Description	Acer Part Number
Screws				
	1	SCRW I NO6-32 L5 BZN	SCRW I NO6-32 L5 BZN	86.00J07.B60
	1	SCRW PAN #6-32 L6 NI BOXER WZS	SCRW PAN #6-32 L6 NI BOXER WZS	86.00J44.C60
	1	SCRW PAN M3 L5 BZN	SCRW PAN M3 L5 BZN	86.1A324.5R0
	1	SCREW FLAT #6-32*3/16 NI	SCREW FLAT #6-32*3/16 NI	86.5A5B6.012
	1	SCRW MB FLAT #6-32 5MM NI	SCRW MB FLAT #6-32 5MM NI	86.9A5G6.162
Speaker				
	1	SPEAKER CHIAMAW 9M-20A200-000 ACER LOGO LF 0810	SPEAKER ACER LOGO/LF0810	SP.10600.011
	1	SPEAKER USB2.0 DXP 1007011-0G	USB/0810 AC.203USB.0G ACER LOG	SP.10600.010
	1	SPEAKER JAZZ USB2.0 USB MS1238UA	SPEAKER JS USB2.0 USB MS1238UA	SP.10600.013

Technical Specifications

This section provides technical specifications for the system.

Processor

Intel Core 2 Quad

Item	Specification							
Model Number	Q6600	Q6700	Q8200	Q9300	Q9400	Q9450	Q9550	Q9650
Core (nm)	65	65	45	45	45	45	45	45
L2 Cache Size (MB)	8	8	4	6	6	12	12	12
Clock Speed (GHz)	2.4	2.66	2.33	2.5	2.66	2.66	2.83	3.0
Front Side Bus (MHz)	1066	1066	1333	1333	1333	1333	1333	1333
Frequency (MHz)	2400	2667	2333	2500	2667	2667	2833	3000
Socket	LGA 775	LGA 775	LGA 775	LGA 775	LGA 775	LGA 775	LGA 775	LGA 775
Clock Multiplier	9x	10x	7x	7.5x	8x	8x	8.5x	9x
Voltage (V)	1.1-1.372	1.1-1.372	0.85-1.3625	0.85-1.3625	0.85-1.3625	0.85-1.3625	0.85-1.3625	0.85-1.3625
Thermal Design Power (W)	95/105	95	95	95	95	95	95	95

Intel Core 2 Duo

Item	Specification		
Model Number	E4700	E7200	E8400
Core (nm)	65	45	45
L2 Cache Size (MB)	2	3	6
Clock Speed (GHz)	2.6	2.53	3
Front Side Bus (MHz)	800	1066	1333
Frequency (MHz)	2600	2533	3000
Socket	LGA 775	LGA 775	LGA 775
Clock Multiplier	13x	9.5x	9x
Voltage (V)	1.162-1.312	0.85-1.3625	0.85-1.3625
Thermal Design Power (W)	65	65	65

Intel Pentium Dual-Core

Item	Specification			
Model Number	E2180	E2200	E2220	E5200
Architecture (nm)	65	65	65	45
L2 Cache Size (MB)	1	1	1	2
Clock Speed (GHz)	2.0	2.2	2.4	2.5
Front Side Bus (MHz)	800	800	800	800
Frequency (MHz)	2000	2200	2400	2500
Socket	LGA 775	LGA 775	LGA 775	LGA 775
Clock Multiplier	10x	11x	12x	12.5x
Voltage (V)	1.162-1.312	1.162-1.312	0.85-1.5	1.162-1.312
Thermal Design Power (W)	65	65	65	65

Intel Celeron Dual-Core

Item	Specification
Type	Intel Celeron Dual-Core
Model Number	E1200
Architecture (nm)	65
L2 Cache Size (KB)	512
Clock Speed (GHz)	1.6
Front Side Bus (MHz)	800
Frequency (MHz)	1600
Socket	LGA 775
Clock Multiplier	8x
Voltage (V)	1.162-1.312
Thermal Design Power (W)	65

Intel Celeron

Item	Specification
Model Number	450
Architecture (nm)	65
L2 Cache Size (KB)	512
Clock Speed (GHz)	2.2
Front Side Bus (MHz)	800
Frequency (MHz)	n/a
Socket	LGA 775
Clock Multiplier	8x
Voltage (V)	1.0-1.3375
Thermal Design Power (W)	35

System Board Major Chips

Item	Specification
System core logic	NVIDIA NForce MCP73PV 1048 BGA
Memory controller	NVIDIA NForce MCP73PV 1048 BGA
Storage controller	NVIDIA NForce MCP73PV 1048 BGA
Video controller	NVIDIA NForce MCP73PV 1048 BGA
PCI controller	NVIDIA NForce MCP73PV 1048 BGA
LAN controller	NVIDIA NForce MCP73PV 1048 BGA + Realtek RTL8211C
Audio controller	Realtek ALC888S
Super I/O controller	ITE IT8718 GX

System Memory

Item	Specification			
Memory controller	NVIDIA NForce MCP73PV 1048 BGA			
Memory type	DDR2-800 unbuffered DIMM			
Module name	PC2-6400			
Organization	ECC			
Pin count	240			
DIMM sockets	2			
DIMM size	512 MB or 1 GB			
Minimum memory	512 MB			
Maximum memory	2 GB			
Vendor	Nanya	Unifosa	Transcend/Jetram	Apacer
Model name	NT1GT64U8HB0BY-AD NT2GT64U8HD0BY-AD	GU341G0ALEPR6B2C6CE GU342G0ALEPR692C6CE	JM800QLU-1G JM800QLU-2G	75.073AA.G00 75.A73AA.G03
Type	DDR2	DDR2	DDR2	DDR2
DIMM size (GB)	1, 2	1, 2	1, 2	1, 2
Module structure	128 x 64, 256 x 64	128 x 64, 256 x 64	128 x 64, 256 x 64	128 x 64, 256 x 64
Pin	240			

System BIOS

Item	Specification
BIOS vendor	American Megatrends Inc.
BIOS version	R01-A3
Flash ROM	8 MB

Hard Disk Drive

Item	Specification		
Storage controller	NVIDIA NForce MCP73PV 1048 BGA		
Vendor	WD	Seagate	HGST
Model no.	WD1600AAJS-22WAA0 WD3200AAJS-22B4A0 WD5000AAJS-22A8B0 WD6400AAKS-22A7B0	ST3160815AS ST3320813AS ST3500820AS	HDS721616PLA380 HDP725032GLA380 HDP725050GLA380
Interface	SATA	SATA	SATA
Size	3.5-inch	3.5-inch	3.5-inch
Transfer rate (Gb/s)	3	100 MBps	3
Spindle speed (RPM)	7200	7200	7200
Capacity (GB)	160, 320, 500, 640	160, 320, 500	160, 320, 500
Cache (MB)	160/320/500 GB: 8 640 GB: 16	160/500 GB: 8 320 GB: 16	160 GB: 8 320/500 GB: 16

PCI Interface

Item	Specification
PCI controller	NVIDIA NForce MCP61 692 BGA
Number of slots	PCI Express x 1 slot PCI Express x16 slot

Network Interface

Item	Specification
LAN controller	NVIDIA NForce MCP61 692 BGA + Marvell 88E1116
Supports LAN protocol	10/100/1000 Mbps
LAN connector type	RJ45

SATA Interface

Item	Specification
SATA controller	Embedded SATA controller
Connectors	Four SATA ports

Keyboard and Input Devices

Item	Specification
Controller	NVIDIA NForce MCP61 692 BGA + SIO ITE8718F
Connectors	• PS2 keyboard and mouse connector • COM port • Parallel port

Optical Drive

Super Multi

Item	Specification		
Vendor	HLDS	PLDS	Sony
Model name	GH-15F	DH-16A3S	AD-7203S
Drive type	Super Multi	DVD-ROM	Super Multi
Write Speed	—	—	DVD-R: 20x max. DVD +R: 20x max. DVD-RW: 6x max. DVD +RW: 8x max. DVD-R DL: 12x max. DVD +R9: 8x max. DVD-RAM: 12x max. CD-R: 48x max. CD-RW: 32x max.
Read Speed	—	—	DVD: 16x max. CD: 48x max.
Data Transfer Rate	—	—	—
Access Time	—	—	DVD: 160 ms CD: 140 ms
Buffer Size	4 MB	4 MB	2 MB
Interface Type	Serial ATA	Serial ATA	Serial ATA

DVD-ROM

Item	Specification	
Vendor	HLDS	PLDS
Model name	GDR-H20N	DH-16D2S
Drive type	DVD-ROM	DVD-ROM
Write Speed	—	—
Read Speed	CD-ROM Max 52x DVD-ROM Max 16x	CD-RAM 5x CD Max 48x DVD Max 16x
Data Transfer Rate	CD Max 7.8 Mbytes DVD Max 22.1 Mbytes	—
Access Time	(Random) CD 90 ms (Random) DVD 100 ms (Full) CD 140 ms (Full) DVD 160 ms	CD 12 ms DVD 140 ms DVD-RAM 150 ms
Buffer Size	198KB with buffer under run prevention technology	198 KB
Interface Type	Serial ATA	Serial ATA